Fire Performance of Three Wired Glazed Window Assemblies

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16. Abstract				
Three window assemblies, described	herein, were tested	in accordance with	the standard procedu	res outlined in
IMO Res. A.517 (13), "Fire Test Proc	edures for 'A' 'B' and	I 'F' Class Division	s." The primary purpos	se of performing
these tests was to determine the radi	ative heat flux and te	mnerature measur	ements on the surface	of the bulkhead
when subjected to fire conditions. In	all three tests the wi	iro alace melted an	d fell out of the test fra	me prior to the
when subjected to fire conditions. In	all three tests, the w	ile glass melled an	the unexpeced curface	o of the
end of the 60-minute fire exposure p	eriod. The peak neat	flux recorded from	title unexposed surfac	2
assemblies was approximately 48 kW/m ² with cumulative fluxes at 37 minutes of approximately 60 MJ/m ² .				
Indicated surface temperatures on the panes approached 750° C, while the steel framework showed surface				
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METRIC CONVERSION FACTORS

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1.0 INTRODUCTION

This report describes the testing and analysis of three window assemblies, and includes descriptions of the test procedures followed, the assembly tested, and the results obtained. The results presented apply only to the material tested, in the manner tested and not to any similar materials or material combinations.

The IMO Res. A.517 (13), "Fire Test Procedures for 'A', 'B,' and 'F' Class Divisions" is intended to evaluate the duration for which the described assembly will contain a fire, or retain its structural integrity, or display both properties dependent upon the type of assembly involved during a predetermined fire test exposure.

The test exposes a non-loadbearing, vertical glazed element to a standard fire exposure controlled to achieve specified temperatures and pressures throughout a given time period. Points on the standard time/temperature curve are shown in Table 1 and are used to control the fire exposure.

TABLE 1.1 POINTS ON THE TIME/TEMPERATURE CURVE

TIME	TEMPERATURE
0:00 minutes	20°C (68°F)
05:00 minutes	576°C (1069°F)
10:00 minutes	679°C (1254°F)
15:00 minutes	738°C (1360°F)
30:00 minutes	841°C (1546°F)
60:00 minutes	945°C (1733°F)

IMO Res. A.517 (13) is designed to determine the thermal endurance of several classes of decks and bulkheads. The current revision of this procedure does not specifically address window requirements. The procedures and acceptance criteria, however, have been similarly applied to an "A" class door. Temperature measurements are to be recorded on the unexposed surface of the door. The duration of the test is a minimum of 60 minutes for an "A" class division, with the rise of temperature limited for the stated time period. Observations and criteria are applied for the structural integrity, smoke or hot gas penetration (cotton pad test), and maximum deflections.

This procedure measures the assembly's response to exposure in terms of the transmission of heat and hot gases through the assembly. The insulating value of the specimen should be such that the average temperature reading of the thermocouples (TC's) on the unexposed surface will not rise more than 139°C above the initial temperature, nor will the temperature at any one point on the surface, including any joint, rise more than 180°C above the initial temperature, during the time specified. These temperature rise requirements should not be exceeded during the specified time period according to the following desired ratings:

"A-60" Standard 60 minutes

"A-30" Standard 30 minutes

"A-15" Standard 15 minutes

"A-0" Standard 0 minutes

Heat flux (HF) measurements were performed to determine the levels of radiation coming through or from the assembly during the fire exposure. The procedures for the heat flux and temperature measurement are presented in <u>Thermal Radiation From Marine Bulkheads</u>, SwRI Final Report No. 01-4580, April 1993. Furnace pressure measurements are required to assure that the test specimen maintains a positive pressure with respect to ambient over the upper two-thirds of the assembly.

Also specified was a hose stream test after successful completion of the 60-minute fire exposure period. The hose stream test was not conducted as all three test assemblies lost their structural integrity prior to 60 minutes.

2.0 TEST PROCEDURE

SwRI's vertical furnace is capable of exposing a maximum test specimen of 3.8 x 3.8 m (12.5 x 12.5 ft). The 0.76-m (30-in.) deep furnace is equipped with nine premixed air/natural gas burners symmetrically placed across the back wall and controlled by a variable air-gas ratio regulator. View ports are located on both sides of the furnace to allow observation of the surface exposed to the flame.

The conduct of the fire test was controlled according to the standard time/temperature curve, as indicated by the average temperature obtained from the readings of five TC's symmetrically located across the face of the specimen 100 mm (4 in.) away. The TC's consisted of a bare bead supported by a ceramic insulator and steel tube such that the bead extended 25 mm (1 in.) from the end of the insulator. During a test, the furnace temperature is controlled such that the area under the average time/temperature curve is within ± 15 percent during the first 10 minutes of the test, within ± 10 percent of the corresponding area under the standard time/temperature curve during the first half hour, and within ± 5 percent for any period after the first half hour. At any time after the first 10 minutes the mean furnace temperature should not differ from the standard curve by more than ± 100 °C.

Temperatures of unexposed surfaces were measured with 0.5 mm (0.02 in.), Type "K" (Chromel-Alumel) TC's, brazed to a copper disc 12 mm (0.45 in.) in diameter and 0.2 mm (0.008 in.) in thickness. The disc was covered with a 30 x 30 x 2-mm (1.2 x 1.2 x 0.08-in.) thick pad having a density of 900 ±10 kg/m³. The pads were firmly attached to the surface. Nine TC's were bonded to the glass surface using a sodium silica 40 solution adhesive thickened slightly with Syloid 244FP powder. Two additional TC's were fastened to the mullions and held in place with small clips impaled on steel weld pins adjacent to the pad. Temperature readings were taken at appropriate locations on the unexposed surface and monitored continuously throughout the test. Thermocouple locations are shown in Figure A-1 of Appendix A.

Heat flux measurements were accomplished with transducers of the Schmidt-Boelter type from Medtherm Corporation. Five transducers were located approximately 1.5 m (0.46 ft) from the surface of the bulkhead. Three had a view angle of 30° (total heat flux), while the other two had a view angle of 60° (one total heat flux, the other radiative heat flux). The arrangement and procedures are further discussed in Thermal Radiation From Marine Bulkheads, SwRI Final Report No. 01-4580.

Three 30° circular view total heat flux transducers viewed the upper, middle, and lower third of the bulkhead (labeled Rad Nos. 1, 2, and 5, respectively). The size of the panes was such that the three transducers viewed only the panes and did not include the steel framework. The remaining two 60° view transducers viewed the middle of the bulkhead (labeled Rad Nos. 3 and 4). Rad No. 3 was also a total heat flux transducer, while Rad No. 4 was a radiation pyrometer with a sapphire window. All the transducers were calibrated to indicate incident heat flux. The layout of the transducers can be found in Figure A-2 of Appendix A. Calibration information for the heat flux transducers is contained in Appendix B.

3.0 TEST ASSEMBLY

Each of the three window bulkhead assemblies consisted of a typical commercial window framework of 16 gage mild steel. The window panes consisted of 6-mm (0.25-in.) polished wire glass with the wire forming a diamond pattern supplied by Anemostat Door Products located in Carson, California. A total of nine panes were used in each assembly. The panes were installed in the framework and held in place with glass stops on the unexposed face. The size distribution of the nine panes can be found in the construction drawings located in Figure A-3 of Appendix A. A strip of closed cell PVC tape (Norton 990), 3 mm (0.12 in.) thick x 10 mm (0.39 in.) wide, was placed between the pane and the metal framework on both sides of the pane for Test Nos. 1 and 2. In Test No. 3, the PVC tape was not installed. The glass stops were re-positioned to pinch the window panes against the framework.

The overall dimensions of the window bulkhead were 2,489 x 1,956 mm high (98 x 77 in. high). The bulkhead was installed in one of SwRI's test frames. The test frame was then placed on SwRI's vertical furnace. The bulkhead/window assembly was then exposed to the heating conditions prescribed in the standard for a one-hour period. The furnace pressure was continuously recorded at the three-fourths height of the bulkhead for each test. Complete photographic documentation of the assemblies can be found in Appendix C.

4.0 TEST RESULTS

4.1 Test No. 1

The first bulkhead test was conducted on May 26, 1993, at approximately 10:50 a.m., with Mr. Louis Nash of the U. S. Coast Guard present to witness all three tests. The TC connections were verified and the furnace burners ignited to begin the 60-minute fire exposure test. The ambient temperature at the beginning of the test was 28°C. Visual observations recorded during the test are presented in Table 2.

Table 2. Visual Observations - Test No. 1

Time (min:sec)	Observations	
00:40	All panes of glass beginning to crack	
01:24	Light smoke escaping from around window edges	
03:19	Mid span of test frame bowed towards the furnace approximately 25 mm (1 in.)	
07:43	Smoke escaping from top two-thirds of window test frame	
15:18	Smoke decreasing to only light wisps	
38:50	Bottom middle pane beginning to distort All other panes beginning to only slightly distort	
40:10	Middle pane bubbled out and fell out of test frame	
41:24	End of test	

The peak heat flux prior to the end of the test was approximately 71 kW/m². Due to the range of the heat flux readings, the cumulative flux was calculated based on the highest indicating heat flux transducer, in this case Rad No. 2. This varies slightly from the previous reference (Thermal Radiation From Marine Bulkheads, 1993) where the cumulative flux was calculated during those tests based on the average flux of Rad Nos. 1, 2, 3, and 5. The total cumulative heat flux (for Rad No. 2) at the end of the test was approximately 70 MJ/m². Rad No. 4 was lower than the others, which is consistent with the usage of the sapphire window. Indicated surface temperatures on the panes approached 730°C, with the indicated temperature on the steel frame being approximately 540°C. Temperature and heat flux data for Test No. 1 can be found in Appendix D.

4.2 Test No. 2

The second bulkhead test was conducted on May 26, 1993, at approximately 2:45 p.m. The TC connections were verified and the furnace burners ignited to begin the 60-minute fire exposure test. The ambient temperature at the beginning of the test was 37°C. Visual observations recorded during the test are presented in Table 3.

Table 3. Visual Observations - Test No. 2

Time (min:sec)	Observations	
00:30	All panes of glass beginning to crack	
01:28	Very light smoke escaping around edges of window panes due to PVC tape	
06:50	Smoke intensity increasing	
08:19	Moderate amounts of smoke escaping from top two-thirds of test assembly	
09:14	PVC tape intermittently burning, approximately 1-second durations, on the exposed face of the test assembly	
33:35	Top middle pane of glass beginning to melt	
34:10	Middle pane of glass bubbling outward approximately 25 mm (1 in.)	
35:48	Top middle pane of glass bubbling outward at top	
36:52	Top middle pane of glass starting to fall out of frame	
37:46	Top middle pane of glass has completely fallen out of test frame End of test	

The peak heat flux at the end of the test was 48 kW/m², with a total cumulative heat flux (for Rad No. 2) of 64 MJ/m². The cumulative heat flux curve was based again on Rad No. 2, although Rad No. 5 was very close in magnitude throughout the test. Indicated surface temperatures on the panes approached 730°C, with the indicated temperature on the steel frame being approximately 550°C, as was observed in Test No. 1. Temperature and heat flux data for Test No. 2 can be found in Appendix D.

4.3 Test No. 3

The third bulkhead test was conducted on May 27, 1993, at approximately 2:45 p.m. The TC connections were verified and the furnace burners ignited to begin the 60-minute fire exposure test. The ambient temperature at the beginning of the test was 28°C. Visual observations recorded during the test are presented in Table 4.

Table 4. Visual Observations - Test No. 3

Time (min:sec)	Observations	
00:44	All panes of glass beginning to crack	
03:45	Light smoke escaping from the edges of the window frame	
13:46	Mid span of test frame bowed towards the furnace approximately 12 mm (0.5 in.)	
15:57	Smoke intensity decreasing, only light wisps of smoke visible	
40:00	Middle pane beginning to sag and deform at edges	
46:56	Top middle large pane bubbling outward approximately 25 to 50 mm (1 to 2 in.) Right side panes (top and middle) also bubbling outward	
48:00	Top edge of middle pane falling into furnace	
48:30	Middle pane has folded (in half) onto itself Top right pane falling out of frame Middle right pane beginning to fall out of frame on top edge End of test	

The peak heat flux at the end of the test was 57 kW/m², with a total cumulative heat flux (for Rad No. 2) of 92 MJ/m². Again, Rad No. 3 was lower than the 30° transducers due to the added view including the cooler steel. Rad No. 4 was the lowest, as expected, due to the sapphire window and the wider view. Indicated surface temperatures on the panes approached 760°C, with the indicated temperature on the steel frame being approximately 585°C. Temperature and heat flux data for Test No. 3 can be found in Appendix D.

Table 5 summarizes the peak heat flux and integrated radiated heat flux recorded up to 37 minutes for each of the total flux transducers during the three tests. Due to the varied termination points for the three tests, 37 minutes was chosen as a reference time to compare heat flux levels. From the geometry, Rad Nos. 1, 2, and 5 viewed similar areas, thus the recorded fluxes and integrated fluxes should be similar. The integrated or cumulative radiated energy of Rad No. 3 was approximately 10 to 15 percent lower than the other heat flux transducers because the view area included the cooler steel framework.

Table 5. Peak and Total Heat Flux Recorded at 37 Minutes

Test	Rad No.	Peak HF @ 37 Min (kW/m²)	Total Radiated Energy @ 37 Min (MJ/m²)
	1	41.7	52.6
1	2	45.1	57.0
1	3	38.8	48.2
	5	43.9	55.0
	1	45.9	56.8
	2	48.4	60.2
2	3	42.4	51.1
	5	45.6	56.8
	1	41.8	51.2
	2	46.1	55.6
3	3	40.1	47.5
	5	44.6	53.2

Although the surface TC's were included for consistency with similar tests, it should be noted that the TC did not necessarily record an accurate surface temperature. This is due to the fact that the TC was receiving heat energy from the panes and the furnace being radiated through the glass and absorbed on the surface of the copper disk.

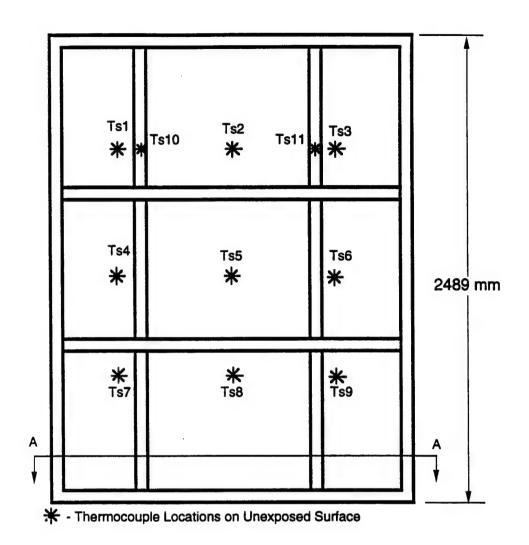
As the window panes began to reach their melting point and flow out of the test frame, the recorded heat flux levels showed obvious increases. In all three tests, the recorded heat flux increased approximately 5 to 7 kW/m² until the wire glass fell out of the test frame and the test was terminated. Correspondingly, the cumulative heat flux also showed a rise as the window assembly failed. It is interesting to note a subtle jump in the graphs of the surface heat flux approximately five minutes prior to failure. This increase may be attributed to the wire glass changing state and allowing an increased amount of radiative transmission through the assembly.

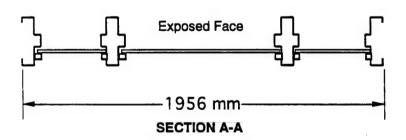
5.0 CONCLUSIONS

Three window assemblies, described herein, were tested in accordance with the standard procedures outlined in IMO Res. A.517 (13), "Fire Test Procedures for 'A', 'B,' and 'F' Class Divisions." Since the integrity of the window assemblies was not maintained during the entire exposure period, none of the assemblies have met the requirements for a Class A-0 window assembly. The primary purpose of performing these tests was to determine the radiative heat flux and temperature measurements on the surface of the bulkhead when subjected to fire conditions. Peak heat fluxes recorded from the unexposed surface of the assemblies were approximately 39 to 48 kW/m² with cumulative fluxes at 37 minutes of approximately 48 to 60 MJ/m². Indicated surface temperatures on the panes approached 750°C, while the steel framework showed surface temperatures of approximately 550°C.

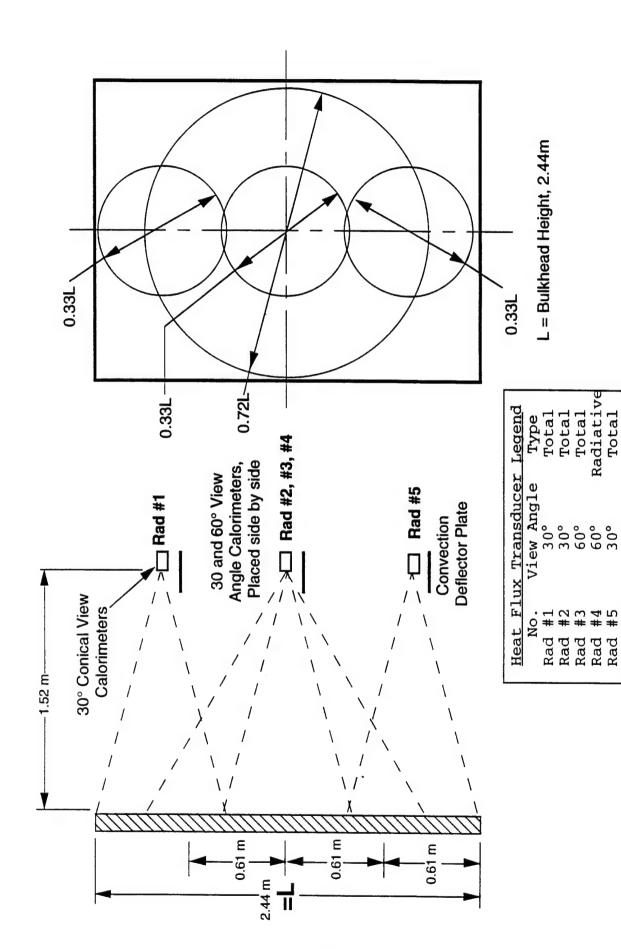
APPENDIX A

CONSTRUCTION DRAWINGS AND MATERIALS INFORMATION

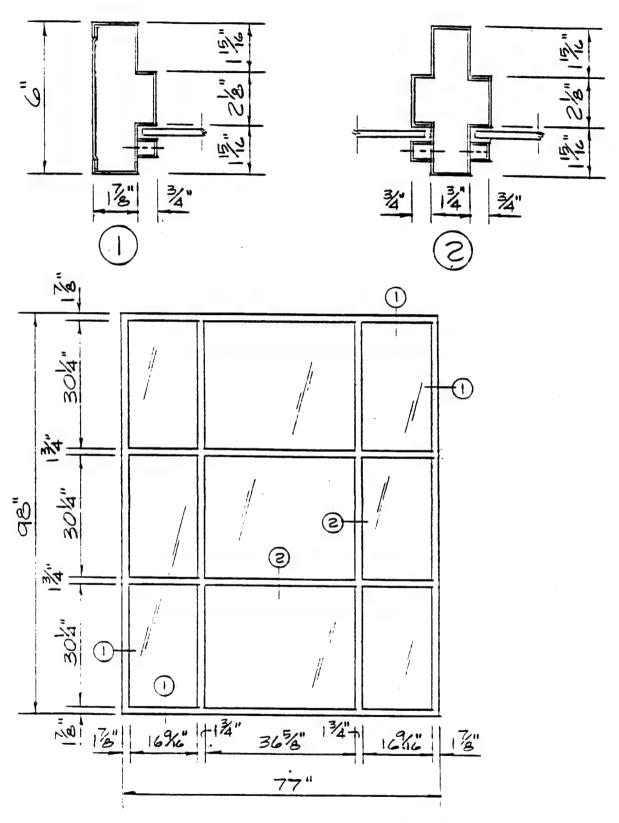




Bulkhead Construction, with Surface Thermocouple Locations (Ts1-11)



Heat Flux Transducer Locations with Respect to Bulkhead



WINDOW FRAME ELEVATION

APPENDIX B

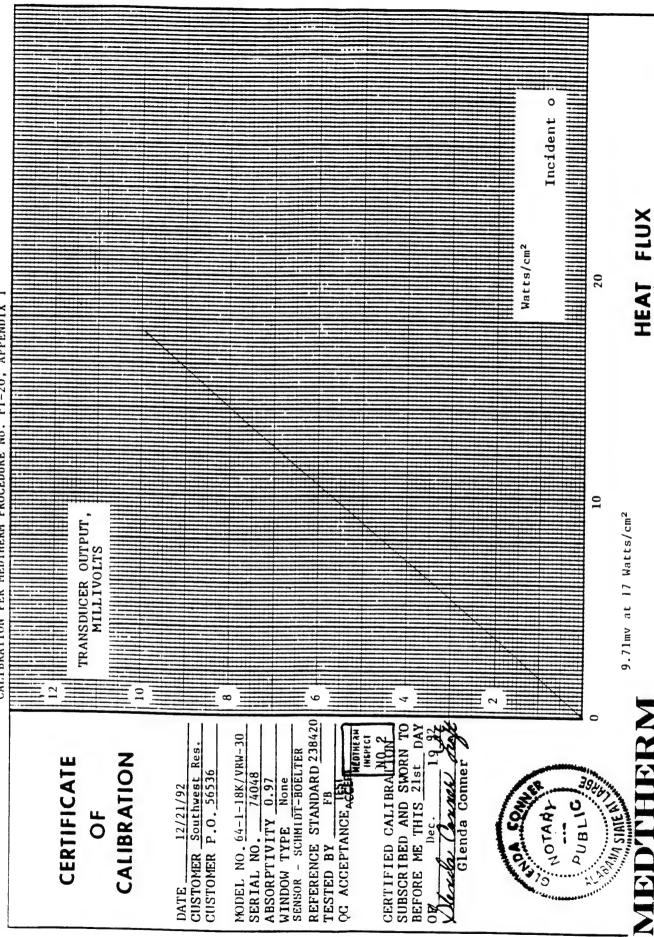
HEAT FLUX TRANSDUCER CALIBRATION INFORMATION

Incident o HEAT FLUX Watts/cm² 20 CALIBRATION PER MEDTHERM PROCEDURE No. PI-20, APPENDIX I 9.61mv at 17 Watts/cm² TRANSDUCER OUTPUT, MILLIVOLTS 2 2 œ REFERENCE STANDARD 238420 TESTED BY FB SUBSCRIBED AND SWORN TO BEFORE ME THIS 21st DAY HEDTHE AL MODEL NO. 64-1-18K/VRW-30 CERTIFIED CALIBRALHERA **HEFEC!** CUSTOMER Southwest Res. SENSOR - SCHMIDT-BOELTER CALIBRATION CERTIFICATE Glenda Conner CHSTOMER P.O. 56536 Verda Cornel SINIER CO SERIAL NO. 7404 ABSORPTIVITY 0.97 None OC ACCEPTANCE ACE 12/21/92 PUBLIC NOTARY OF Dec. WINDOW TYPE

AS RECEIVED CALIBRATION

POST OFFICE BOX 412 / HUNTSVILLE ALABAMA 35804 / TELEPHONE 12051 R37 2000

MEDTHERM CORPORATION



POST OFFICE BOX 412 / HUNTSVILLE, ALABAMA 35804 / TELEPHONE (205) 837-2000

CORPORATION

MEDTHERM

POST OFFICE BOX 412 / HUNTSVILLE, ALABAMA 35804 / TELEPHONE (205) 837-2000

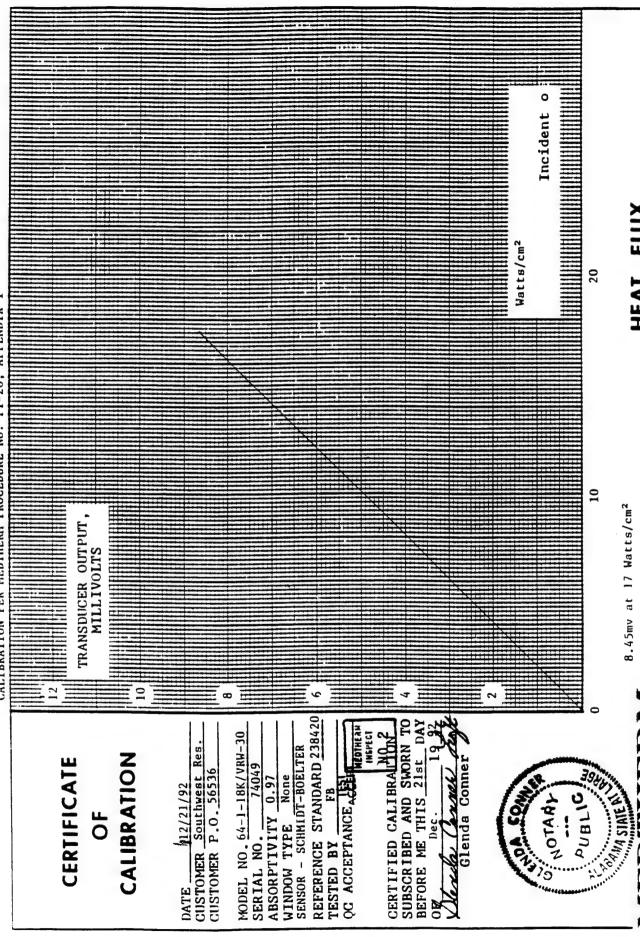
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POST OFFICE BOX 412 / HUNTSVILLE, ALABAMA 35804 / TELEPHONE (205) 837-2000

CORPORATION

AS RECEIVED CALIBRATION

CALIBRATION PER MEDTHERM PROCEDURE No. PI-20, APPENDIX 1



HEAL FIL

POST OFFICE ROY A12 / HHMTCUILLE ALABATIC STORY

CORPORATION

B-5

APPENDIX C

PHOTOGRAPHIC DOCUMENTATION



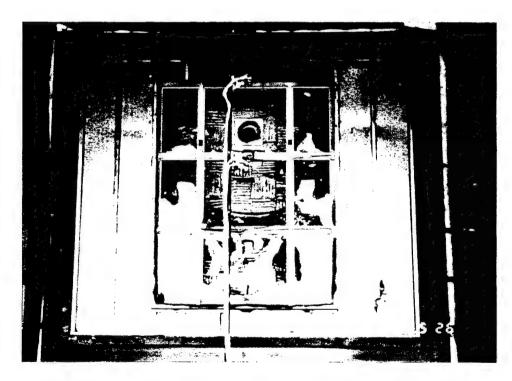
1. Exposed Face of Window Assembly Prior to Fire Exposure Test



2. Unexposed Face of Window Assembly Prior to Fire Exposure Test



3. Unexposed Face of Window Assembly (Test No. 1) Showing Top and Middle Panes Missing



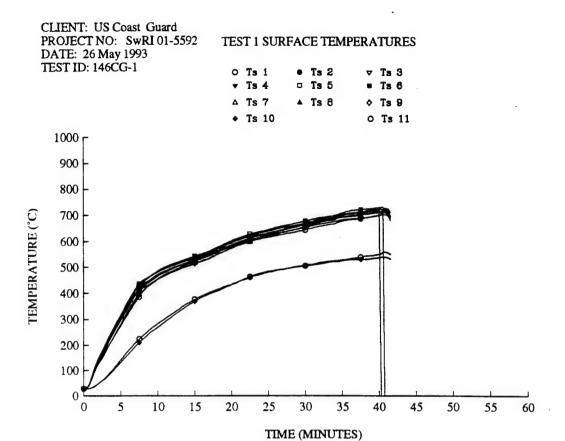
4. Unexposed Face of Window Assembly (Test No. 2) Showing Distorted and Missing Glass

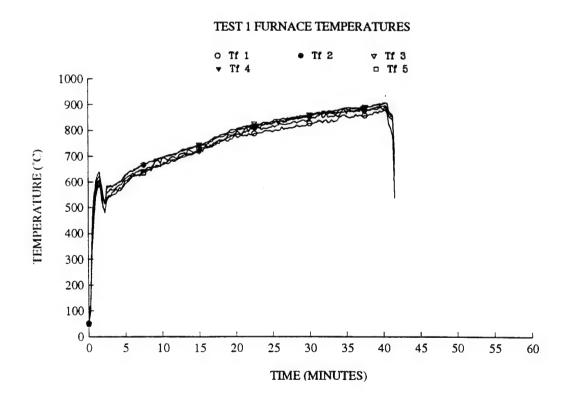


5. Unexposed Face of Window Assembly (Test No. 3)
Top Pane has Fallen while Right and Middle
Panes have Melted and Fell from Frame

APPENDIX D

TEMPERATURE, HEAT FLUX, AND PRESSURE DATA

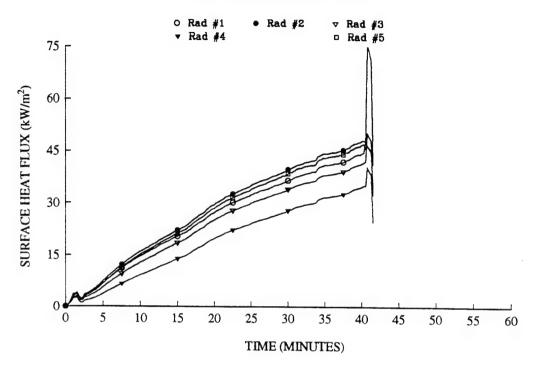




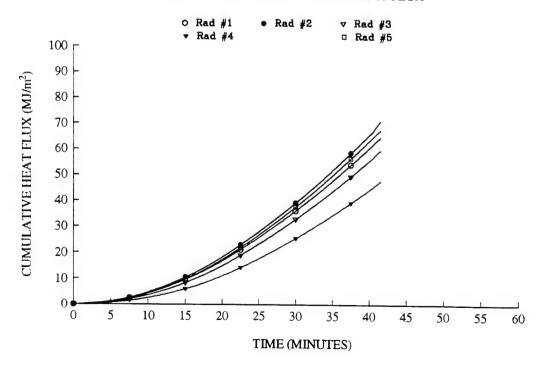
CLIENT: US Coast Guard PROJECT NO: SwRI 01-5592

DATE: 26 May 1993 TEST ID: 146CG-1

TEST 1 SURFACE HEAT FLUX



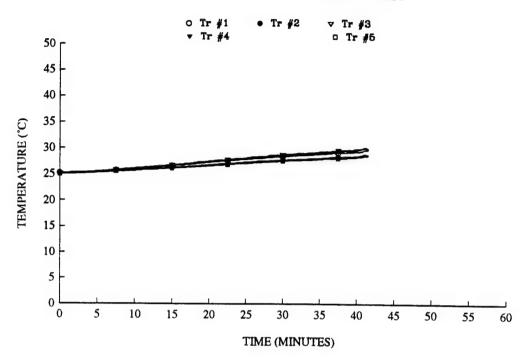
TEST 1 CUMULATIVE SURFACE HEAT FLUX



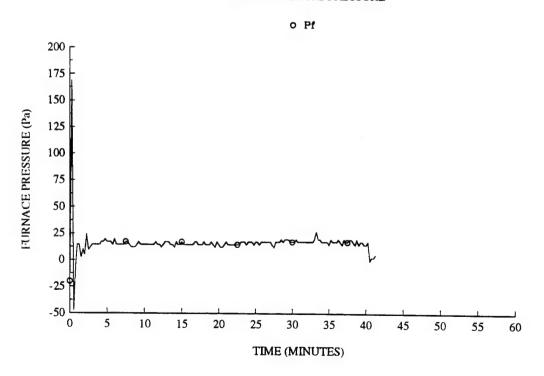
CLIENT: US Coast Guard PROJECT NO: SwRI 01-5592

DATE: 26 May 1993 TEST ID: 146CG-1

TEST 1 HEAT FLUX BODY TEMPERATURES

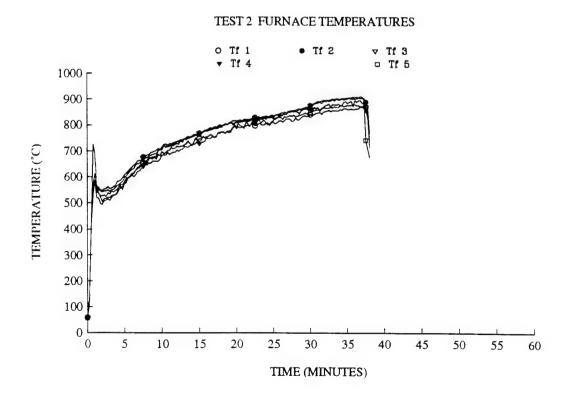


TEST 1 FURNACE PRESSURE



CLIENT: US Coast Guard PROJECT NO: SwRI 01-5592 **TEST 2 SURFACE TEMPERATURES** DATE: 26 May 1993 TEST ID: 146CG-2 v Ts 3 0 Ts 1 • Ts 2 Ts 4 = Ts 6 Ts 7 ♦ Ts 9 Ts 10 O Ts 11 1000 r 900 800 TEMPERATURE (°C) 700 600 500 400 300 200 100 0 5 0 10 15 20 25 30 35 40 45 50 55 60

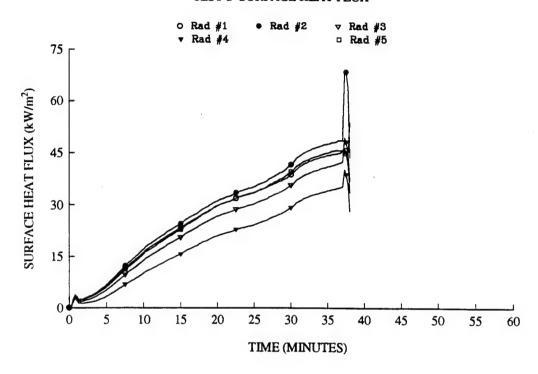
TIME (MINUTES)



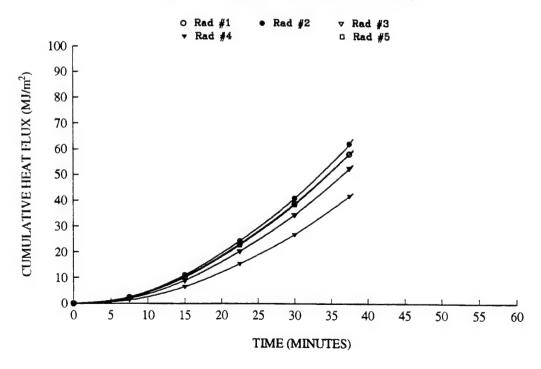
CLIENT: US Coast Guard PROJECT NO: SwRI 01-5592

DATE: 26 May 1993 TEST ID: 146CG-2

TEST 2 SURFACE HEAT FLUX



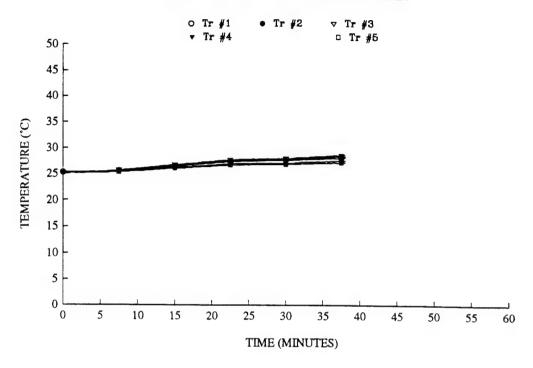
TEST 2 CUMULATIVE SURFACE HEAT FLUX



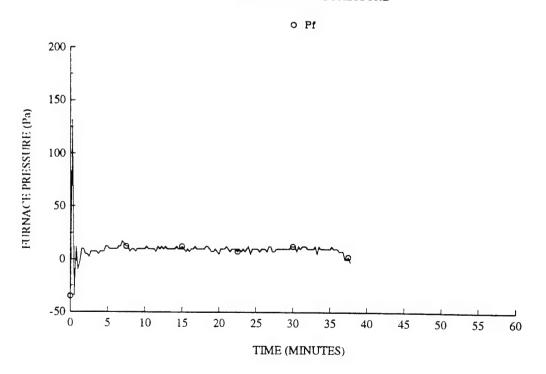
CLIENT: US Coast Guard PROJECT NO: SwRI 01-5592

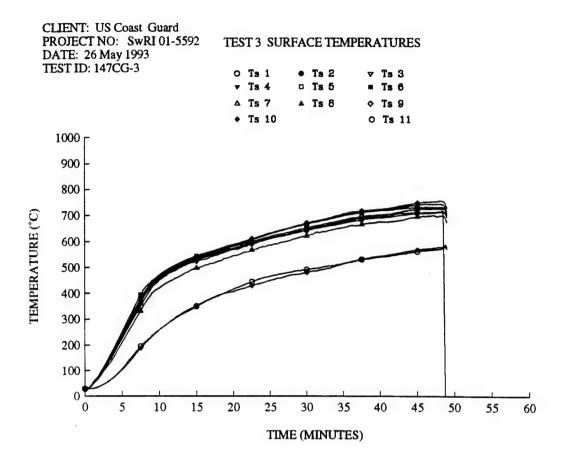
DATE: 26 May 1993 TEST ID: 146CG-2

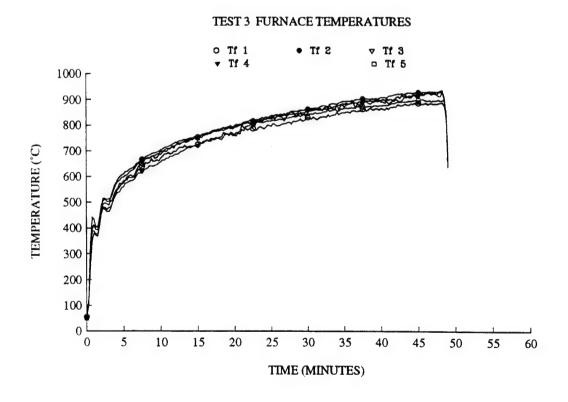
TEST 2 HEAT FLUX BODY TEMPERATURES



TEST 2 FURNACE PRESSURE



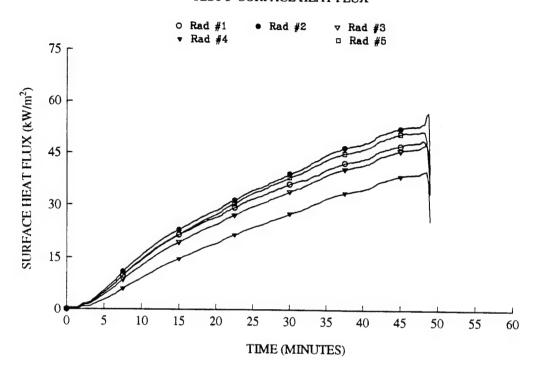




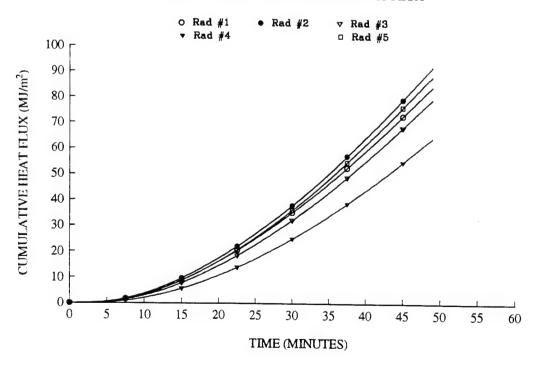
CLIENT: US Coast Guard PROJECT NO: SwRI 01-5592

DATE: 27 May 1993 TEST ID: 147CG-3

TEST 3 SURFACE HEAT FLUX



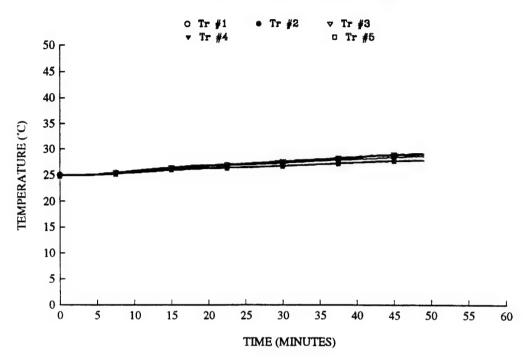
TEST 3 CUMULATIVE SURFACE HEAT FLUX



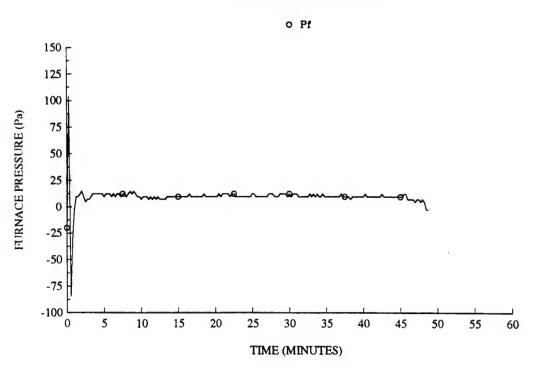
CLIENT: US Coast Guard PROJECT NO: SwRI 01-5592

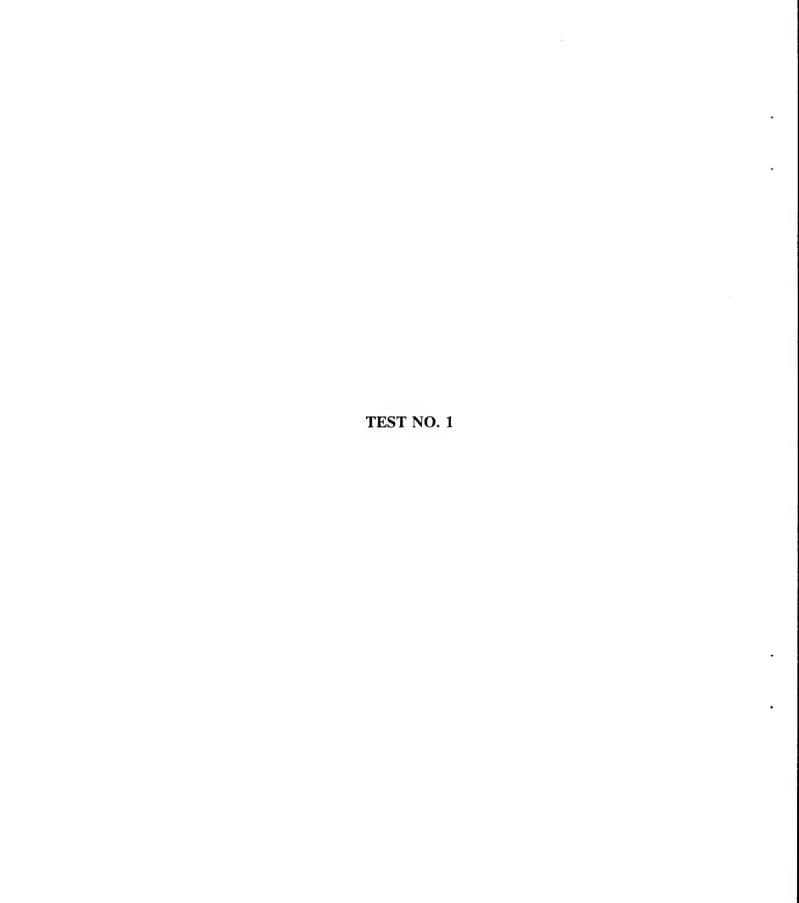
DATE: 27 May 1993 TEST ID: 147CG-3

TEST 3 HEAT FLUX BODY TEMPERATURES



TEST 3 FURNACE PRESSURE





COAST GUARD FURNACE TEMPERATURES (°C) AND PRESSURE (Pa) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
0: 0	51.3	51.4	49.7	49.1	47.4	49.8	-20.2
0:15	142.9	147.6	129.7	126.6	97.7	128.9	169.1
0:30	403.0	458.8	390.4	420.5	334.9	401.5	-47.6
0:45	502.5	556.9	526.4	521.5	452.9	512.0	-5.3
1: 0	560.9	581.4	602.9	557.7	540.8	568.7	14.6
1:15	599.8	611.7	628.1	584.5	573.0	599.4	14.6
1:30	608.8	624.8	639.8	606.7	590.8	614.2	2.2
1:45	580.7	572.1	593.0	532.9	546.3	565.0	9.7
2: 0	540.0	534.1	549.7	502.1	509.7	527.1	4.7
2:15	520.5	513.9	516.3	484.1	479.1	502.8	24.6
2:30	557.7	583.9	575.9	526.4	538.0	556.4	9.7
2:45	562.8	584.3	581.5	541.7	547.8	563.6	12.2
3: 0	573.4	586.0	584.0	542.6	545.8	566.4	14.6
3:15	569.0	583.3	579.9	559.9	548.9	568.2	14.6
3:30	570.1	587.3	588.9	564.0	551.6	572.4	14.6
3:45	577.0	589.4	592.5	572.9	555.3	577.4	14.6
4: 0	583.6	597.9	597.9	566.2	565.2	582.2	14.6
4:15	589.2	602.9	598.0	579.0	565.2	586.9	17.1
4:30	590.8	602.6	606.0	573.4	570.1	588.6	17.1
4:45	603.7	613.7	618.4	589.2	581.1	601.2	19.6
5: 0	613.7	623.4	628.5	604.8	592.2	612.5	17.1
5:15	619.3	633.5	629.9	606.8	598.7	617.7	17.1
5:30	624.3	637.5	638.8	613.6	604.2	623.7	17.1
5:45	626.9	643.9	642.2	619.9	612.9	629.1	14.6
6: 0	634.3	641.3	642.9	623.7	621.0	632.6	19.6
6:15	633.2	651.1	646.0	629.5	624.1	636.8	14.6
6:30	640.4	650.9	652.9	625.2	623.2	638.5	14.6

COAST GUARD FURNACE TEMPERATURES (°C) AND PRESSURE (Pa) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
6:45	639.6	654.0	656.0	628.8	628.0	641.3	14.6
7: 0	646.2	662.8	660.1	623.8	628.8	644.3	14.6
7:15	643.1	663.4	665.9	634.7	633.7	648.2	14.6
7:30	635.8	666.6	665.1	643.9	635.8	649.4	17.1
7:45	648.0	668.0	672.0	648.5	643.9	656.1	17.1
8: 0	654.3	671.9	671.3	643.0	648.7	657.8	14.6
8:15	657.5	678.6	678.5	649.4	647.4	662.3	12.2
8:30	655.9	679.6	679.6	644.1	654.3	662.7	12.2
8:45	663.9	679.0	681.7	656.6	656.3	667.5	12.2
9: 0	675.8	686.0	688.7	660.5	658.0	673.8	14.6
9:15	686.0	682.8	689.0	657.4	665.0	676.1	17.1
9:30	683.2	689.6	692.5	659.5	663.5	677.7	14.6
9:45	672.7	690.5	693.4	666.2	660.5	676.6	14.6
10: 0	693.6	691.8	695.8	666.1	667.1	682.9	14.6
10:15	695.0	695.5	698.6	669.0	676.7	686.9	14.6
10:30	689.6	699.7	701.4	673.6	673.5	687.6	14.6
10:45	682.0	700.6	703.2	670.6	681.6	687.6	14.6
11: 0	692.2	701.4	705.8	675.6	685.9	692.2	14.6
11:15	696.1	702.6	705.6	683.7	685.4	694.7	14.6
11:30	700.3	708.4	708.9	679.6	686.7	696.8	17.1
11:45	694.0	704.9	711.1	680.8	686.6	695.5	14.6
12: 0	691.1	712.1	711.0	689.9	686.5	698.1	14.6
12:15	703.7	715.0	716.7	690.7	693.1	703.9	12.2
12:30	711.3	720.7	721.5	693.8	698.0	709.1	14.6
12:45	709.3	720.3	727.5	702.3	696.2	711.1	17.1
13: 0	714.5	723.4	727.2	705.9	697.4	713.7	17.1
13:15	707.9	725.8	726.3	708.7	700.8	713.9	17.1

COAST GUARD FURNACE TEMPERATURES (*C) AND PRESSURE (Pa) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
13:30	726.9	726.9	730.9	709.2	703.9	719.5	14.6
13:45	721.8	729.6	733.3	708.6	704.3	719.5	14.6
14: 0	718.2	730.4	732.9	710.1	704.5	719.2	12.2
14:15	713.9	734.9	736.1	712.4	709.5	721.4	17.1
14:30	718.0	736.8	738.9	718.7	713.3	725.1	14.6
14:45	715.6	741.0	741.5	720.3	718.8	727.4	14.6
15: 0	731.5	740.5	743.6	717.1	719.9	730.5	17.1
15:15	728.9	740.4	746.3	730.2	719.8	733.1	14.6
15:30	717.7	742.9	745.3	732.4	725.4	732.7	14.6
15:45	735.7	742.3	750.2	731.2	729.7	737.8	14.6
16: 0	736.6	745.4	753.6	730.7	741.5	741.6	14.6
16:15	732.6	748.9	754.5	733.9	733.3	740.7	14.6
16:30	744.0	756.0	760.2	737.3	734.2	746.4	14.6
16:45	735.7	756.4	764.6	742.2	736.1	747.0	17.1
17: 0	740.3	764.3	770.2	751.5	745.4	754.4	17.1
17:15	743.0	767.3	774.7	750.0	753.7	757.7	14.6
17:30	751.3	771.6	772.6	757.3	756.8	761.9	14.6
17:45	748.0	774.7	777.8	761.0	762.0	764.7	14.6
18: 0	761.8	773.2	782.2	761.3	756.3	767.0	17.1
18:15	758.5	774.2	783.9	759.6	760.9	767.4	14.6
18:30	762.9	778.0	785.5	764.4	761.7	770.5	14.6
18:45	758.7	784.5	787.4	767.8	771.2	773.9	14.6
19: 0	757.5	787.9	792.7	772.5	782.7	778.7	17.1
19:15	766.3	792.0	799.0	773.6	780.9	782.4	14.6
19:30	764.8	790.1	801.8	779.4	780.3	783.3	12.2
19:45	776.8	792.9	802.1	781.6	783.2	787.3	17.1
20: 0	778.4	797.9	802.5	782.8	789.1	790.1	14.6

COAST GUARD FURNACE TEMPERATURES (*C) AND PRESSURE (Pa) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
20:15	770.9	802.2	806.6	784.0	795.6	791.8	12.2
20:30	774.5	801.7	808.7	782.9	788.1	791.2	12.2
20:45	781.4	805.0	808.2	781.6	782.3	791.7	14.6
21: 0	777.6	804.5	813.0	794.0	790.2	795.9	17.1
21:15	779.4	807.4	813.8	791.1	805.8	799.5	14.6
21:30	777.4	810.1	816.7	796.7	807.8	801.8	14.6
21:45	785.1	810.9	815.5	795.6	795.1	800.4	14.6
22: 0	782.6	814.0	818.2	804.2	809.5	805.7	14.6
22:15	780.6	815.0	821.4	804.0	804.2	805.0	14.6
22:30	787.1	813.4	824.7	804.7	816.3	809.2	14.6
22:45	787.0	818.3	819.5	802.5	815.6	808.6	14.6
23: 0	788.3	817.1	823.0	810.9	814.0	810.7	17.1
23:15	789.9	819.8	822.3	806.9	806.7	809.2	17.1
23:30	789.7	821.3	826.0	802.2	817.9	811.4	17.1
23:45	792.8	820.0	828.9	807.8	819.4	813.8	14.6
24: 0	797.7	824.3	829.7	805.6	823.5	816.2	17.1
24:15	796.4	822.2	829.5	806.2	822.8	815.4	17.1
24:30	798.6	825.5	826.5	811.0	827.2	817.8	17.1
24:45	797.2	821.8	831.4	810.1	822.5	816.6	14.6
25: 0	793.4	826.2	832.9	818.4	825.2	819.2	17.1
25:15	799.0	831.9	840.4	812.5	829.0	822.6	17.1
25:30	800.8	835.7	840.6	816.7	836.1	826.0	14.6
25:45	798.9	833.5	841.0	819.1	823.8	823.3	17.1
26: 0	799.8	836.0	841.3	827.1	835.0	827.8	17.1
26:15	812.5	835.8	843.7	822.1	835.8	830.0	17.1
26:30	803.3	835.6	846.0	821.6	830.1	827.3	17.1
26:45	806.9	831.2	841.1	820.1	834.7	826.8	17.1

COAST GUARD FURNACE TEMPERATURES (°C) AND PRESSURE (Pa) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
27: 0	805.9	836.7	847.3	824.6	844.7	831.8	17.1
27:15	809.5	837.7	844.8	825.0	839.0	831.2	14.6
27:30	807.7	841.7	847.8	825.2	847.4	834.0	12.2
27:45	809.5	844.9	848.9	831.6	839.5	834.9	17.1
28: 0	812.4	844.2	849.5	833.3	841.6	836.2	17.1
28:15	819.7	845.4	851.7	827.0	852.9	839.3	17.1
28:30	814.5	843.4	848.0	832.1	850.2	837.6	19.6
28:45	813.7	847.9	855.1	834.1	845.7	839.3	17.1
29: 0	816.3	847.2	854.5	838.1	849.4	841.1	19.6
29:15	815.3	851.5	856.2	838.5	854.1	843.1	19.6
29:30	816.3	849.0	856.3	833.4	855.7	842.2	19.6
29:45	824.4	854.1	858.3	837.9	858.1	846.6	17.1
30: 0	826.1	856.4	860.3	845.2	854.4	848.5	17.1
30:15	822.6	857.6	861.7	845.6	857.0	848.9	17.1
30:30	825.6	859.2	861.4	849.7	857.6	850.7	19.6
30:45	829.0	861.8	864.8	845.1	862.7	852.7	17.1
31: 0	830.7	863.5	865.4	854.2	868.4	856.4	17.1
31:15	838.5	861.1	869.1	855.6	865.1	857.9	17.1
31:30	834.8	866.8	865.8	865.1	866.2	859.7	17.1
31:45	827.7	862.3	874.1	849.7	871.8	857.1	17.1
32: 0	836.4	867.0	868.4	850.2	873.8	859.2	17.1
32:15	839.4	867.3	867.0	864.5	868.7	861.4	17.1
32:30	828.5	868.1	874.4	849.8	863.3	856.8	17.1
32:45	831.4	868.6	874.7	853.1	869.6	859.5	17.1
33: 0	840.2	869.5	873.5	853.3	864.1	860.1	19.6
33:15	831.5	870.3	874.2	851.7	864.4	858.4	27.1
33:30	833.9	868.1	876.9	857.7	859.1	859.1	19.6

COAST GUARD FURNACE TEMPERATURES (°C) AND PRESSURE (Pa) TEST NO. 1

DATE: 26 MAY 1993 SWRI PROJECT NO.: 01-5592 FILE: 146CG-1.DAT TEST TYPE: IMO RES.A.517(13)

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf	
33:45	838.4	869.4	876.9	853.3	866.8	861.0	19.6	
34: 0	848.9	876.8	879.6	856.1	866.8	865.6	17.1	
34:15	852.5	881.9	881.7	865.7	870.5	870.4	17.1	
34:30	857.6	881.7	883.8	881.4	869.7	874.8	17.1	
34:45	857.5	887.1	885.6	878.4	871.8	876.1	17.1	
35: 0	853.0	882.0	886.3	863.5	872.7	871.5	14.6	
35:15	849.3	877.6	887.3	877.1	875.3	873.3	19.6	
35:30	848.7	883.5	886.7	876.6	872.0	873.5	17.1	
35:45	851.4	882.6	886.0	874.6	874.3	873.8	17.1	
36: 0	851.2	883.2	885.1	870.6	873.5	872.7	17.1	
36:15	860.8	885.2	886.5	878.5	873.1	876.8	19.6	
36:30	854.4	886.2	883.6	878.0	875.1	875.4	17.1	
36:45	857.6	885.2	883.3	879.7	872.9	875.8	14.6	
37: 0	856.8	885.5	893.4	881.0	882.6	879.9	19.6	
37:15	853.4	885.4	889.9	865.1	878.3	874.4	17.1	
37:30	856.4	887.6	891.0	872.0	879.5	877.3	17.1	
37:45	855.4	889.1	893.8	877.2	878.6	878.8	19.6	
38: 0	859.8	892.0	891.2	876.9	878.1	879.6	19.6	
38:15	862.4	890.3	890.8	881.2	877.7	880.5	17.1	
38:30	860.9	894.5	895.2	881.7	884.6	883.4	14.6	
38:45	869.4	899.1	897.3	881.2	886.5	886.7	19.6	
39: 0	871.1	898.5	898.8	880.8	888.2	887.5	14.6	
39:15	867.0	901.5	898.5	881.2	892.1	888.0	17.1	
39:30	874.1	901.5	904.3	896.3	887.3	892.7	17.1	
39:45	871.3	899.0	901.0	886.9	892.8	890.2	14.6	
40: 0	875.9	901.9	907.1	878.6	894.8	891.7	14.6	
40:15	879.1	906.2	907.0	897.2	892.3	896.3	17.1	

COAST GUARD FURNACE TEMPERATURES (*C) AND PRESSURE (Pa) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
40:30	867.0	903.3	905.7	885.7	863.0	884.9	-0.3
40:45	871.0	868.4	875.5	853.4	822.9	858.2	2.2
41: 0	854.2	865.1	864.0	847.6	807.1	847.6	2.2
41:15	851.9	858.0	856.1	839.7	775.5	836.2	4.7

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
0: 0	0.0	0.0	0.0	0.0	0.0
0:15	0.3	0.3	0.3	0.2	0.3
0:30	1.3	1.3	1.0	0.9	1.0
0:45	2.1	2.3	1.7	1.6	1.9
1: 0	3.1	3.6	2.6	2.4	3.1
1:15	3.4	3.7	2.8	2.5	3.5
1:30	3.8	4.1	3.1	2.6	3.7
1:45	2.8	2.9	2.2	1.6	2.5
2: 0	2.3	2.4	1.8	1.1	2.0
2:15	2.4	2.5	1.9	1.1	2.2
2:30	3.2	3.5	2.6	1.7	3.1
2:45	3.5	3.8	2.8	1.9	3.4
3: 0	3.8	4.0	3.0	2.0	3.6
3:15	4.0	4.3	3.3	2.1	3.9
3:30	4.4	4.7	3.5	2.3	4.2
3:45	4.7	5.1	3.9	2.5	4.6
4: 0	5.1	5.5	4.2	2.6	4.9
4:15	5.5	5.9	4.5	2.9	5.4
4:30	5.9	6.3	4.8	3.1	5.7
4:45	6.3	6.9	5.3	3.5	6.3
5: 0	6.8	7.5	5.7	3.8	6.8
5:15	7.3	8.0	6.1	4.1	7.3
5:30	7.8	8.5	6.5	4.4	7.8
5:45	8.3	9.0	6.9	4.7	8.2
6: 0	8.7	9.4	7.3	5.0	8.8
6:15	9.1	9.9	7.7	5.3	9.2
6:30	9.6	10.4	8.1	5.5	9.6

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
6:45	10.0	10.9	8.5	5.8	10.1
7: 0	10.3	11.3	8.9	6.1	10.5
7:15	10.8	11.8	9.2	6.4	11.0
7:30	11.2	12.2	9.6	6.6	11.4
7:45	11.6	12.6	9.9	6.9	11.8
8: 0	11.9	13.0	10.3	7.2	12.2
8:15	12.4	13.5	10.7	7.5	12.7
8:30	12.8	13.9	11.0	7.8	13.1
8:45	13.0	14.2	11.3	8.0	13.4
9: 0	13.5	14.6	11.7	8.3	13.8
9:15	13.7	15.0	12.0	8.5	14.1
9:30	14.1	15.3	12.3	8.8	14.5
9:45	14.4	15.7	12.6	9.0	14.9
10: 0	14.7	16.0	12.9	9.2	15.2
10:15	15.0	16.3	13.2	9.4	15.5
10:30	15.3	16.6	13.4	9.7	15.8
10:45	15.6	16.9	13.7	9.9	16.1
11: 0	15.8	17.2	14.0	10.1	16.4
11:15	16.2	17.6	14.3	10.4	16.7
11:30	16.5	17.9	14.6	10.6	17.0
11:45	16.8	18.2	14.8	10.8	17.3
12: 0	16.9	18.4	15.1	11.0	17.6
12:15	17.3	18.8	15.4	11.3	17.9
12:30	17.7	19.2	15.8	11.6	18.3
12:45	18.0	19.5	16.1	11.9	18.6
13: 0	18.3	19.8	16.3	12.1	18.9
13:15	18.5	20.0	16.6	12.3	19.2

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
13:30	18.8	20.4	16.9	12.5	19.5
13:45	19.0	20.6	17.1	12.7	19.7
14: 0	19.3	20.9	17.4	12.9	20.0
14:15	19.6	21.2	17.6	13.2	20.3
14:30	19.9	21.6	18.0	13.5	20.7
14:45	20.2	21.9	18.3	13.7	21.0
15: 0	20.4	22.1	18.5	13.9	21.2
15:15	20.7	22.4	18.7	14.1	21.6
15:30	20.9	22.7	19.0	14.3	21.7
15:45	21.1	23.0	19.2	14.5	22.0
16: 0	21.4	23.1	19.4	14.7	22.2
16:15	21.6	23.5	19.7	14.9	22.6
16:30	22.1	24.0	20.2	15.3	23.1
16:45	22.4	24.4	20.5	15.6	23.4
17: 0	22.9	24.8	20.9	16.0	23.9
17:15	23.3	25.3	21.3	16.4	24.4
17:30	23.6	25.7	21.6	16.7	24.7
17:45	24.1	26.1	22.0	17.0	25.1
18: 0	24.3	26.5	22.3	17.3	25.4
18:15	24.6	26.8	22.6	17.5	25.8
18:30	24.9	27.0	22.9	17.8	26.1
18:45	25.4	27.5	23.3	18.2	26.6
19: 0	25.9	28.1	23.8	18.6	27.0
19:15	26.2	28.5	24.1	18.9	27.5
19:30	26.6	29.0	24.5	19.3	27.9
19:45	26.9	29.3	24.8	19.5	28.3
20: 0	27.2	29.5	25.1	19.8	28.5

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
20:15	27.6	29.9	25.4	20.0	28.8
20:30	27.9	30.3	25.7	20.3	29.2
20:45	28.2	30.5	26.0	20.5	29.4
21: 0	28.4	30.8	26.3	20.8	29.9
21:15	28.8	31.1	26.5	21.1	30.1
21:30	29.1	31.6	26.9	21.4	30.5
21:45	29.4	31.8	27.1	21.6	30.8
22: 0	29.6	32.0	27.3	21.8	30.9
22:15	29.9	32.3	27.6	22.0	31.2
22:30	30.1	32.6	27.8	22.2	31.5
22:45	30.4	32.8	28.0	22.4	31.7
23: 0	30.4	33.0	28.2	22.5	31.9
23:15	30.7	33.3	28.4	22.7	32.2
23:30	31.0	33.5	28.6	22.9	32.4
23:45	31.2	33.8	28.9	23.1	32.7
24: 0	31.4	34.0	29.0	23.3	32.9
24:15	31.6	34.2	29.2	23.5	33.1
24:30	31.8	34.4	29.4	23.6	33.3
24:45	31.9	34.6	29.5	23.8	33.4
25: 0	32.2	35.0	29.9	24.1	33.9
25:15	32.5	35.4	30.1	24.3	34.2
25:30	32.8	35.6	30.4	24.5	34.4
25:45	33.0	35.9	30.6	24.7	34.6
26: 0	33.2	36.0	30.7	24.9	34.9
26:15	33.5	36.3	31.0	25.1	35.1
26:30	33.6	36.5	31.1	25.2	35.2
26:45	33.7	36.6	31.3	25.4	35.4

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
27: 0	33.9	36.8	31.4	25.5	35.6
27:15	34.0	36.9	31.6	25.6	35.9
27:30	34.3	37.3	31.8	25.9	36.2
27:45	34.5	37.5	32.0	26.1	36.4
28: 0	34.8	37.8	32.3	26.3	36.6
28:15	35.1	37.9	32.4	26.4	36.7
28:30	35.1	38.0	32.6	26.5	37.0
28:45	35.3	38.4	32.8	26.8	37.3
29: 0	35.5	38.5	33.0	26.9	37.4
29:15	35.8	38.9	33.2	27.2	37.9
29:30	35.9	39.0	33.3	27.3	37.8
29:45	36.1	39.2	33.5	27.4	38.0
30: 0	36.5	39.7	33.9	27.8	38.5
30:15	36.8	39.9	34.1	28.0	38.8
30:30	36.8	40.1	34.3	28.2	38.9
30:45	37.2	40.4	34.6	28.5	39.2
31: 0	37.5	40.7	34.9	28.7	39.5
31:15	37.7	41.0	35.1	28.9	39.9
31:30	37.8	41.1	35.3	29.0	40.0
31:45	38.0	41.3	35.4	29.2	40.0
32: 0	38.2	41.4	35.5	29.3	40.3
32:15	38.4	41.7	35.7	29.5	40.6
32:30	38.5	41.8	35.8	29.6	40.7
32:45	38.7	41.9	36.0	29.7	40.8
33: 0	38.8	42.1	36.1	29.8	40.9
33:15	39.0	42.2	36.2	29.9	40.9
33:30	39.0	42.3	36.3	29.9	40.9

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

_	MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
•						
	33:45	39.1	42.5	36.5	30.1	41.3
	34: 0	39.9	43.4	37.1	30.8	42.1
	34:15	40.4	43.7	37.5	31.1	42.6
	34:30	40.6	44.0	37.8	31.4	42.7
	34:45	40.8	44.3	38.0	31.6	43.1
	35: 0	41.0	44.2	38.0	31.6	43.0
	35:15	41.0	44.2	38.1	31.6	43.1
	35:30	41.0	44.3	38.2	31.7	43.3
	35:45	41.2	44.5	38.3	31.8	43.4
	36: 0	41.2	44.6	38.4	31.9	43.5
	36:15	41.4	44.6	38.5	32.0	43.5
	36:30	41.4	44.8	38.5	32.0	43.7
	36:45	41.6	44.9	38.7	32.2	43.7
	37: 0	41.7	45.1	38.8	32.3	43.9
	37:15	41.8	45.1	38.9	32.4	44.0
	37:30	41.9	45.3	39.1	32.5	44.1
	37:45	42.2	45.6	39.3	32.8	44.6
	38: 0	42.5	45.9	39.6	33.0	44.7
	38:15	42.6	46.0	39.7	33.1	44.9
	38:30	43.0	46.6	40.2	33.5	45.5
	38:45	43.2	46.8	40.4	33.8	45.5
	39: 0	43.7	47.1	40.7	34.1	46.0
	39:15	43.8	47.3	40.9	34.2	46.2
	39:30	44.0	47.5	41.0	34.4	46.4
	39:45	44.0	47.5	41.2	34.5	46.4
	40: 0	44.4	47.9	41.5	34.8	46.9
	40:15	44.6	48.1	41.8	35.0	47.1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
40:30	47.8	47.6	42.1	35.0	45.9
40:45	46.5	75.8	50.1	40.4	46.6
41: 0	45.9	73.6	49.0	39.3	45.8
41:15	45.2	71.2	48.1	38.3	44.8

COAST GUARD HEAT FLUX BODY TEMPERATURES (°C) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
0: 0	25.2	25.1	25.1	25.1	25.0
0:15	25.2	25.1	25.1	25.1	25.1
0:30	25.2	25.1	25.1	25.1	25.1
0:45	25.2	25.1	25.2	25.1	25.1
1: 0	25.2	25.2	25.2	25.2	25.1
1:15	25.2	25.2	25.2	25.2	25.1
1:30	25.3	25.2	25.2	25.2	25.1
1:45	25.3	25.2	25.3	25.2	25.1
2: 0	25.3	25.2	25.2	25.2	25.1
2:15	25.3	25.2	25.3	25.2	25.1
2:30	25.3	25.2	25.3	25.2	25.1
2:45	25.3	25.2	25.3	25.3	25.1
3: 0	25.3	25.2	25.3	25.3	25.1
3:15	25.3	25.2	25.3	25.3	25.1
3:30	25.3	25.2	25.3	25.3	25.2
3:45	25.4	25.3	25.4	25.3	25.2
4: 0	25.4	25.3	25.4	25.3	25.2
4:15	25.4	25.3	25.4	25.3	25.2
4:30	25.4	25.3	25.4	25.4	25.2
4:45	25.5	25.3	25.5	25.4	25.2
5: 0	25.4	25.3	25.5	25.4	25.3
5:15	25.5	25.4	25.5	25.5	25.3
5:30	25.5	25.4	25.5	25.5	25.3
5:45	25.5	25.4	25.6	25.5	25.3
6: 0	25.6	25.4	25.6	25.5	25.3
6:15	25.6	25.5	25.6	25.6	25.3
6:30	25.6	25.5	25.7	25.6	25.4

COAST GUARD HEAT FLUX BODY TEMPERATURES (*C) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
6:45	25.6	25.5	25.7	25.6	25.4
7: 0	25.6	25.5	25.7	25.7	25.4
7:15	25.7	25.6	25.8	25.7	25.4
7:30	25.7	25.6	25.8	25.7	25.5
7:45	25.7	25.6	25.8	25.8	25.5
8: 0	25.8	25.6	25.8	25.8	25.5
8:15	25.8	25.7	25.9	25.8	25.5
8:30	25.8	25.6	25.9	25.8	25.5
8:45	25.9	25.7	26.0	25.9	25.6
9: 0	25.9	25.7	26.0	25.9	25.6
9:15	25.9	25.7	26.0	25.9	25.6
9:30	26.0	25.7	26.1	26.0	25.6
9:45	26.0	25.8	26.1	26.0	25.6
10: 0	26.0	25.8	26.1	26.0	25.6
10:15	26.0	25.8	26.2	26.1	25.7
10:30	26.1	25.8	26.2	26.1	25.7
10:45	26.1	25.9	26.2	26.1	25.7
11: 0	26.1	25.9	26.2	26.2	25.8
11:15	26.1	25.9	26.3	26.2	25.8
11:30	26.2	25.9	26.3	26.2	25.8
11:45	26.2	25.9	26.3	26.3	25.8
12: 0	26.2	26.0	26.4	26.3	25.8
12:15	26.3	26.0	26.4	26.3	25.9
12:30	26.3	26.0	26.4	26.4	25.9
12:45	26.3	26.0	26.5	26.4	25.9
13: 0	26.4	26.1	26.5	26.4	25.9
13:15	26.4	26.1	26.6	26.4	26.0

COAST GUARD HEAT FLUX BODY TEMPERATURES (*C) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
13:30	26.4	26.1	26.6	26.5	26.0
13:45	26.5	26.1	26.6	26.5	26.0
14: 0	26.5	26.2	26.6	26.6	26.1
14:15	26.5	26.2	26.7	26.6	26.1
14:30	26.5	26.2	26.7	26.6	26.1
14:45	26.5	26.2	26.7	26.6	26.1
15: 0	26.6	26.2	26.7	26.7	26.1
15:15	26.6	26.3	26.8	26.7	26.1
15:30	26.7	26.3	26.8	26.7	26.2
15:45	26.7	26.3	26.8	26.7	26.2
16: 0	26.7	26.3	26.9	26.8	26.2
16:15	26.7	26.4	26.9	26.8	26.2
16:30	26.7	26.4	26.9	26.8	26.2
16:45	26.8	26.4	27.0	26.9	26.2
17: 0	26.8	26.4	27.0	26.9	26.3
17:15	26.8	26.5	27.0	26.9	26.3
17:30	26.9	26.5	27.1	27.0	26.3
17:45	26.9	26.5	27.1	27.0	26.3
18: 0	26.9	26.5	27.2	27.0	26.4
18:15	27.0	26.6	27.2	27.1	26.4
18:30	27.0	26.6	27.3	27.2	26.4
18:45	27.1	26.6	27.3	27.2	26.4
19: 0	27.1	26.7	27.3	27.2	26.5
19:15	27.1	26.7	27.3	27.2	26.5
19:30	27.2	26.7	27.4	27.3	26.5
19:45	27.2	26.7	27.4	27.3	26.6
20: 0	27.2	26.8	27.5	27.3	26.6

COAST GUARD HEAT FLUX BODY TEMPERATURES (°C) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
20:15	27.3	26.8	27.5	27.4	26.6
20:30	27.3	26.8	27.5	27.4	26.6
20:45	27.4	26.9	27.6	27.5	26.7
21: 0	27.4	26.9	27.6	27.5	26.7
21:15	27.4	26.9	27.7	27.5	26.7
21:30	27.5	27.0	27.7	27.6	26.7
21:45	27.5	27.0	27.7	27.6	26.7
22: 0	27.5	27.0	27.7	27.6	26.8
22:15	27.5	27.0	27.8	27.6	26.8
22:30	27.5	27.0	27.8	27.7	26.8
22:45	27.6	27.1	27.8	27.7	26.9
23: 0	27.6	27.1	27.9	27.8	26.9
23:15	27.6	27.1	27.9	27.8	26.9
23:30	27.7	27.1	28.0	27.8	27.0
23:45	27.7	27.2	28.0	27.8	27.0
24: 0	27.7	27.2	28.0	27.9	27.0
24:15	27.8	27.2	28.0	27.9	27.0
24:30	27.8	27.2	28.0	27.9	27.0
24:45	27.8	27.3	28.1	28.0	27.1
25: 0	27.8	27.3	28.1	28.0	27.0
25:15	27.9	27.3	28.2	28.0	27.1
25:30	27.9	27.3	28.2	28.0	27.1
25:45	27.9	27.4	28.3	28.1	27.1
26: 0	28.0	27.4	28.3	28.2	27.2
26:15	28.0	27.4	28.3	28.2	27.2
26:30	28.0	27.5	28.3	28.2	27.2
26:45	28.0	27.5	28.4	28.2	27.2

COAST GUARD HEAT FLUX BODY TEMPERATURES (*C) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

_	MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
		u a Conse				
	27: 0	28.0	27.5	28.4	28.2	27.2
	27:15	28.1	27.5	28.4	28.3	27.3
	27:30	28.1	27.5	28.4	28.3	27.3
	27:45	28.2	27.5	28.4	28.3	27.3
	28: 0	28.2	27.5	28.5	28.3	27.3
	28:15	28.2	27.6	28.6	28.4	27.4
	28:30	28.2	27.6	28.6	28.4	27.4
	28:45	28.3	27.6	28.6	28.4	27.4
	29: 0	28.3	27.6	28.6	28.4	27.4
	29:15	28.3	27.7	28.7	28.5	27.4
	29:30	28.3	27.6	28.6	28.5	27.5
	29:45	28.3	27.7	28.6	28.5	27.5
	30: 0	28.3	27.7	28.7	28.5	27.5
	30:15	28.4	27.7	28.7	28.5	27.5
	30:30	28.4	27.7	28.8	28.6	27.5
	30:45	28.4	27.8	28.8	28.7	27.6
	31: 0	28.5	27.8	28.8	28.7	27.6
	31:15	28.5	27.8	28.8	28.7	27.6
	31:30	28.5	27.8	28.9	28.7	27.6
	31:45	28.5	27.8	28.9	28.8	27.6
	32: 0	28.6	27.9	29.0	28.8	27.7
	32:15	28.6	27.9	29.0	28.8	27.6
	32:30	28.6	27.9	29.0	28.8	27.7
	32:45	28.6	27.9	29.0	28.8	27.7
	33: 0	28.6	27.9	29.0	28.8	27.7
	33:15	28.6	27.9	29.0	28.8	27.7
	33:30	28.7	28.0	29.1	28.9	27.7

COAST GUARD HEAT FLUX BODY TEMPERATURES (*C) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
33:45	28.7	28.0	29.1	28.9	27.7
34: 0	28.7	28.0	29.1	28.9	27.8
34:15	28.8	28.0	29.1	29.0	27.8
34:30	28.8	28.0	29.2	29.0	27.8
34:45	28.8	28.1	29.2	29.1	27.9
35: 0	28.9	28.1	29.3	29.1	27.9
35:15	28.9	28.1	29.3	29.1	27.9
35:30	28.9	28.2	29.4	29.2	28.0
35:45	28.9	28.2	29.3	29.2	28.0
36: 0	29.0	28.2	29.4	29.2	28.0
36:15	29.0	28.2	29.3	29.2	28.0
36:30	29.0	28.3	29.4	29.3	28.0
36:45	29.1	28.3	29.5	29.3	28.0
37: 0	29.1	28.3	29.5	29.4	28.1
37:15	29.1	28.3	29.5	29.4	28.1
37:30	29.1	28.4	29.6	29.5	28.1
37:45	29.1	28.4	29.6	29.5	28.1
38: 0	29.1	28.4	29.6	29.4	28.1
38:15	29.1	28.4	29.6	29.5	28.1
38:30	29.1	28.4	29.6	29.5	28.1
38:45	29.2	28.4	29.6	29.5	28.2
39: 0	29.2	28.4	29.7	29.5	28.2
39:15	29.2	28.4	29.6	29.5	28.2
39:30	29.2	28.4	29.7	29.5	28.2
39:45	29.3	28.5	29.8	29.6	28.2
40: 0	29.4	28.5	29.8	29.7	28.3
40:15	29.3	28.5	29.8	29.7	28.3

COAST GUARD HEAT FLUX BODY TEMPERATURES ('C) TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
40:30	29.4	28.6	29.9	29.8	28.3
40:45	29.4	28.6	29.9	29.9	28.4
41: 0	29.6	28.9	30.1	30.0	28.5
41:15	29.6	28.8	30.1	30.0	28.5

SURFACE TEMPERATURES (°C) COAST GUARD TEST NO. 1

Ts 11

28.2 28.9 30.8 33.9 38.2 43.5 49.2 54.9 59.5 65.9

SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13) Ts 10 100.4 108.2 28.0 28.2 34.3 44.0 64.9 85.0 92.3 38.7 49.7 55.2 29.1 31.1 60.1 78.1 Ts 9 128.9 136.9 150.0 164.6 178.6 192.4 103.2 119.8 205.5 218.2 231.1 244.1 27.6 28.2 32.8 61.5 44.1 82.1 **Ts 8** 140.6 165.9 220.9 28.0 107.9 126.1 152.5 180.2 194.3 207.7 233.9 246.5 258.7 28.5 45.9 64.2 127.6 148.6 162.0 175.9 189.6 Ts 7 114.5 137.6 203.0 216.3 228.2 240.7 28.0 28.5 33.2 60.0 99.1 79.1 4.1 **Ts** 6 112.9 131.6 143.0 157.4 172.8 188.5 204.3 219.5 234.0 247.6 261.0 28.2 274.1 28.7 34.3 47.5 67.4 90.1 115.9 134.6 179.7 195.2 210.6 225.0 238.8 278.9 S 164.7 252.4 150.1 265.7 28.3 28.9 34.9 49.2 6.69 92.9 Ls Ts 4 104.2 121.8 36.6 145.2 159.0 173.7 204.5 219.6 233.9 247.8 261.5 189.1 28.3 33.5 62.8 83.2 28.7 45.4 Ts 3 181.4 108.5 135.3 50.0 165.4 197.2 212.4 226.7 239.8 253.4 266.5 126.1 34.5 0.99 28.7 Ts 2 140.3 152.6 166.8 9.961 108.8 126.4 181.4 224.8 250.8 263.3 28.2 67.0 88.0 211.1 238.1 28.7 34.4 48.0 Ts 1 117.6 131.6 142.6 154.9 9.791 9.081 193.4 205.7 228.9 101.4 217.4 28.5 33.8 45.9 240.1 28.1 62.7 **DATE: 26 MAY 1993** FILE: 146CG-1.DAT MIN:SEC 0:15 0:45 1:15 1:30 1:45 2: 0 2:15 2:30 2:45 3:0 3:15 3:30 3:45 4:15

115.0 106.2

80.8 89.4 8.76

73.1

124.1

116.5

256.8

270.9

253.5

287.0

291.6

275.2

278.9

275.3

251.4

4:30

DAT

1-5592

MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
4:45	263.2	287.8	291.5	289.1	304.2	299.7	266.8	283.1	269.5	124.3	133.0
5: 0	275.0	300.5	304.0	303.4	317.1	313.0	279.6	295.4	282.4	132.1	142.0
5:15	287.2	312.8	316.3	318.5	329.9	327.2	291.4	307.6	295.2	140.7	150.7
5:30	298.4	325.9	330.7	333.0	343.1	341.0	303.4	320.4	308.3	148.6	159.5
5:45	309.7	338.9	343.7	347.5	356.3	354.4	317.6	333.1	321.7	156.0	168.7
0:9	321.3	351.4	356.3	361.2	369.1	367.8	330.2	345.6	334.5	164.0	177.1
6:15	332.6	362.5	367.9	374.0	381.2	380.7	342.9	357.7	346.7	171.8	185.8
6:30	344.7	372.6	378.8	386.2	392.6	393.2	354.9	369.4	358.1	179.5	193.9
6:45	355.9	381.4	389.7	398.1	402.8	404.7	364.8	381.4	368.0	187.8	202.0
7: 0	366.2	390.5	399.8	410.0	412.2	416.0	374.6	393.6	378.4	195.6	209.5
7:15	376.0	400.4	410.4	420.7	420.6	426.5	383.3	404.9	389.6	203.1	216.9
7:30	385.7	409.4	420.5	430.1	428.2	436.1	392.2	415.1	401.1	210.1	224.0
7:45	395.2	417.5	429.3	437.5	435.2	443.4	400.8	423.9	410.9	217.1	230.3
8: 0	404.9	424.7	435.8	443.5	441.9	448.5	408.3	430.9	418.9	224.2	237.0
8:15	413.7	431.0	442.2	448.9	448.3	452.9	416.3	436.7	424.8	229.9	243.5
8:30	422.1	436.4	444.7	454.4	454.2	456.7	423.4	441.5	429.2	236.3	250.2
8:45	429.4	440.7	447.3	459.9	459.6	461.3	428.3	446.0	432.5	243.2	256.6
9: 0	434.9	445.4	451.6	465.4	464.9	465.9	431.9	450.2	436.0	249.7	262.5
,							0			0 2 2 0	

DAT

5592 7(13)

MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
					-						
9:30	445.5	455.2	462.7	475.8	474.8	473.7	443.1	459.8	444.2	260.4	272.9
9:45	450.2	460.7	468.9	480.8	479.3	477.9	448.5	464.6	448.7	264.9	278.5
10: 0	454.5	465.7	472.8	485.6	483.7	482.2	454.4	468.9	453.1	269.9	283.5
10:15	459.2	470.4	476.8	490.1	487.8	485.5	458.8	472.6	456.9	274.9	288.6
10:30	464.3	473.9	480.1	494.2	491.6	488.8	461.9	476.4	460.5	280.5	293.2
10:45	468.7	477.4	483.6	498.1	495.0	491.9	465.6	480.0	464.1	286.5	298.4
11: 0	472.3	480.9	487.0	501.4	498.2	495.1	468.0	483.5	468.0	292.2	303.4
11:15	476.3	484.4	489.5	504.6	501.5	497.8	472.7	487.3	471.8	297.0	308.5
11:30	479.8	488.4	493.4	507.7	504.7	500.9	477.3	490.9	475.3	301.6	313.6
11:45	483.0	491.7	496.3	510.6	507.6	503.6	479.8	494.0	478.6	307.5	318.6
12: 0	485.8	494.6	498.7	513.2	510.7	506.0	482.3	496.6	481.7	313.0	323.3
12:15	488.6	497.5	502.0	515.4	513.7	508.3	485.3	499.3	484.5	318.1	327.7
12:30	492.3	500.5	504.4	518.0	516.7	511.2	489.1	502.1	487.3	323.2	332.6
12:45	495.7	503.5	506.2	520.5	519.6	514.1	492.5	505.3	490.6	328.4	337.5
13: 0	499.1	506.0	8.808	522.9	522.5	516.6	495.5	508.3	493.2	333.5	342.3
13:15	502.2	508.6	509.7	525.3	525.1	519.3	497.9	510.7	496.2	338.0	347.7
13:30	505.5	511.1	513.3	527.7	527.7	521.4	501.0	513.6	498.4	342.5	351.9
13:45	508.9	513.3	515.7	530.2	530.0	523.5	503.3	515.8	500.8	347.7	356.3
14: 0	511.5	515.5	518.9	532.7	532.5	526.1	505.5	518.5	503.4	352.5	360.8
	•										

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
14:15	514.8	517.9	522.7	535.1	534.8	528.8	508.1	521.2	505.8	356.5	364.6
14:30	517.7	520.6	525.6	537.6	537.3	531.7	511.3	523.9	508.3	360.8	368.5
14:45	520.6	522.7	527.7	540.2	539.8	534.0	514.0	526.6	510.6	364.8	371.9
15: 0	522.9	525.4	531.2	542.6	542.1	536.5	516.4	529.4	513.5	368.6	376.1
15:15	525.6	527.5	532.7	544.9	544.4	538.8	518.4	532.0	515.8	372.7	380.2
15:30	528.5	529.6	537.1	547.3	546.7	541.1	520.8	534.8	518.1	376.6	383.6
15:45	530.8	531.6	540.4	549.7	548.9	543.6	522.6	536.7	520.6	380.2	387.2
16: 0	533.4	533.6	543.5	551.9	551.2	545.9	525.3	539.4	522.5	384.2	390.1
16:15	536.8	536.0	545.4	554.1	553.5	548.0	528.3	541.3	524.8	387.4	393.6
16:30	539.6	538.8	547.1	556.7	556.1	550.6	529.8	543.9	527.7	390.8	397.3
16:45	542.6	541.0	550.5	559.3	559.0	553.2	532.0	546.7	530.1	394.7	399.8
17: 0	545.4	543.8	554.9	562.0	562.0	556.4	535.7	549.9	533.3	397.2	402.7
17:15	548.2	546.9	556.9	565.0	565.4	559.4	539.4	552.7	536.7	399.2	405.1
17:30	551.4	549.9	558.5	6.795	568.8	562.6	542.6	555.6	540.3	402.3	408.6
17:45	553.4	553.1	564.8	570.6	572.3	566.4	544.3	559.0	544.2	405.4	411.0
18: 0	555.7	556.7	569.0	573.5	575.6	569.5	548.8	562.5	547.6	407.4	413.3
18:15	559.3	560.3	572.6	576.5	578.9	572.5	552.4	565.6	550.8	409.8	416.0
18:30	563.0	562.2	574.9	579.4	581.8	574.9	554.7	568.4	553.9	413.4	418.5

SURFACE TEMPERATURES (°C) COAST GUARD TEST NO. 1

DATE: 26 MAY 1993 FILE: 146CG-1.DAT

MIN:SEC

19: 0 19:15 19:30 19:45

SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13) Ts 11 423.9 431.0 436.6 439.6 442.0 448.0 426.4 428.7 433.4 450.8 453.7 456.2 458.5 461.9 465.2 470.3 445.1 468.3 472.4 Ts 10 423.5 425.9 428.4 437.4 468.6 432.2 435.4 439.2 443.8 447.3 449.8 451.5 454.5 459.2 464.8 466.9 461.7 457.1 Ts 9 560.5 564.2 571.4 574.3 577.4 580.3 583.3 586.0 595.0 597.8 600.4 9.709 612.0 568.1 589.1 602.7 8.409 7.609 592.1 **Ts 8** 583.6 577.3 580.5 586.5 589.6 592.6 605.5 574.1 595.5 600.4 607.4 609.5 611.8 597.7 615.5 617.4 619.2 603.1 613.7 Ts 7 560.2 562.5 565.9 569.5 574.6 578.6 582.6 584.6 585.8 588.6 593.4 594.9 597.6 0.009 572.3 591.4 602.5 604.8 606.3 **Ts** 6 591.6 581.8 585.0 588.4 594.4 597.7 6.009 603.5 609.3 611.4 614.3 616.6 621.7 623.8 625.8 627.5 630.4 619.1 606.1 588.3 591.9 595.4 598.7 601.7 9.709 610.4 612.8 615.4 618.0 620.5 624.8 656.9 628.8 630.6 632.2 S 604.7 622.7 633.8 Ls 591.0 **Ts 4** 585.2 588.2 594.0 596.9 599.3 601.9 604.5 8.909 6.809 611.0 612.9 615.5 617.9 622.2 624.4 626.6 628.7 620.1 Ts 3 580.3 584.4 588.3 590.5 593.3 597.2 599.9 602.6 604.3 607.5 6.609 611.9 613.9 616.0 6.919 618.0 618.9 621.5 624.0 Ts 2 568.3 571.4 575.3 578.5 581.0 586.8 589.4 591.5 594.2 597.2 599.5 601.9 603.9 605.9 610.0 584.1 607.3 608.7 611.7 Ts 1 567.8 572.9 576.2 581.8 583.0 584.9 588.2 592.5 570.7 579.7 590.4 594.5 597.3 598.7 605.5 600.2 602.4 604.3 607.1

20:15 20:30 20:45

20:0

21:15

21:0

21:45 21:30

22: 0

22:15 22:30 22:45 23:15

23:30

23: 0

SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13) Ts 11 494.6 485.6 488.5 490.0 490.8 495.6 496.6 497.2 474.5 477.9 480.3 481.9 483.5 484.3 486.8 487.7 491.7 493.4 476.1 Ts 10 483.6 489.4 490.3 498.2 476.5 480.5 480.9 484.7 488.6 492.0 471.4 478.2 481.7 494.1 494.7 497.1 474.1 637.6 639.6 641.6 650.6 Ts 9 614.0 616.3 620.6 622.5 624.8 627.0 629.2 631.6 633.7 635.6 643.5 648.6 618.7 645.1 647.1 641.6 643.6 650.6 654.2 Ts 8 620.8 622.8 624.9 626.4 528.3 630.0 632.0 634.4 636.0 637.8 639.7 645.4 647.2 648.7 652.3 629.6 631.8 634.9 636.5 638.4 641.5 Ts 7 8.709 612.6 614.8 616.0 618.0 621.9 625.3 632.7 609.4 611.2 626.7 623.1 640.1 665.5 632.2 634.2 637.4 639.3 641.5 643.4 645.6 647.8 649.6 651.5 653.4 655.2 657.2 658.7 662.3 663.7 9 635.4 660.1 Ts 655.0 656.8 658.2 659.5 663.9 665.3 Ts 5 635.6 645.9 648.0 646.6 651.7 653.3 660.7 662.3 637.3 638.9 640.4 643.9 642.2 654.5 658.6 Ts 4 632.6 634.0 635.2 636.6 638.2 639.7 641.5 643.5 645.3 647.6 649.1 650.5 651.7 652.8 655.7 657.2 630.7 646.0 648.0 648.6 651.6 640.6 642.5 643.8 Ts 3 631.8 634.8 636.7 641.3 643.8 624.4 626.2 626.8 629.9 628.1 634.1 637.1 628.5 635.0 636.0 639.2 640.5 642.2 614.0 621.2 623.2 624.9 626.5 629.7 631.4 Ts 2 615.3 616.5 618.2 619.8 633.1 637.1 615.3 617.0 619.3 620.0 621.8 623.6 625.4 626.3 627.5 629.4 630.0 631.5 632.7 609.5 611.9 612.8 613.8 615.0 Ts 1 608.1 **DATE: 26 MAY 1993** FILE: 146CG-1.DAT MIN:SEC 27:15 25:15 25:45 26:15 26:30 26:45 27: 0 27:30 27:45 28: 0 28:15 24:15 24:45 25:30 23:45 24: 0 24:30 25: 0 26:0

DAT

5592 7(13)

ATE: 26 MAY 1993 LE: 146CG-1.DAT	. J								SW	SWRI PROJECT NO.: 01-55 TEST TYPE: IMO RES.A.517(ICT NO.:
MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
28:30	634.3	644.0	652.7	659.7	8.999	6.999	643.6	655.7	652.6	499.8	498.5
28:45	635.6	645.4	653.6	661.1	668.5	668.2	645.4	657.6	654.4	500.6	499.2
29: 0	637.3	646.2	6.55.9	662.8	670.1	670.1	647.8	628.9	656.1	502.6	500.4
29:15	638.1	647.7	6.729	664.1	671.6	671.6	649.0	661.0	658.2	502.5	501.7
29:30	638.6	649.7	658.3	665.3	673.3	672.5	651.0	662.7	0.099	503.5	502.1
29:45	639.5	651.4	659.6	6.999	674.7	674.0	653.6	664.9	9.199	503.4	503.1
30: 0	642.6	652.0	659.7	668.7	676.4	675.3	656.3	666.4	663.6	8.205	503.8
30:15	646.1	653.0	662.8	0.079	6.77.9	676.7	659.3	9.899	9.599	508.0	504.5
30:30	647.0	655.3	665.3	6.179	1.619	6.879	659.6	670.7	9.199	509.0	505.9
30:45	647.7	657.6	8.799	673.4	681.3	6.089	662.2	673.0	6.699	508.4	506.7
31: 0	650.0	659.3	668.3	674.6	683.4	682.3	664.5	675.2	672.1	509.4	507.4
31:15	652.1	2009	671.0	676.1	685.1	683.8	6.599	677.0	673.9	511.7	508.5
31:30	654.0	662.5	672.6	9.779	9.989	685.1	668.3	8.829	675.7	513.4	509.5
31:45	655.2	663.9	672.4	6.829	688.1	1.989	9.699	680.1	677.4	515.6	510.4
32: 0	656.7	664.9	674.9	680.2	689.5	687.4	671.0	681.7	8.879	518.3	511.1
32:15	657.8	6.599	676.7	681.8	690.4	6.889	673.3	683.1	680.4	517.9	512.6
32:30	660.1	667.5	677.7	683.1	691.5	690.1	674.7	684.6	682.3	518.9	513.8
32:45	660.1	8.899	8.629	683.9	692.7	691.3	675.8	685.6	683.8	519.8	515.6
33: 0	662.3	9.699	9.089	684.6	693.6	692.4	8.77.8	6.989	685.6	521.3	517.5
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SURFACE TEMPERATURES (°C) COAST GUARD TEST NO. 1

Ts 11

519.2 520.6 521.9 523.8 523.9 525.5

SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13) Ts 10 521.0 522.3 522.0 520.6 521.3 523.2 524.5 526.8 526.5 528.3 527.5 528.4 528.1 Ts 9 8.989 681.9 0.689 9.069 692.4 9.969 698.5 701.8 702.9 704.3 705.2 706.2 694.4 700.1 Ts 8 688.7 9.969 9.869 700.3 701.3 702.6 703.3 704.9 705.8 704.1 690.1 Ts 7 678.5 9.689 6.069 694.9 678.8 681.6 688.5 691.5 692.3 693.2 693.7 695.3 679.7 Ts 6 694.8 695.9 0.869 700.0 702.8 705.5 707.9 709.5 712.0 713.9 715.3 716.8 717.6 Ts 5 694.6 695.4 697.5 6.869 701.9 706.0 707.5 708.2 696.2 700.5 703.2 704.3 705.2 7.907 **Ts 4** 6.989 6.789 689.0 692.6 694.9 0.969 690.3 691.4 693.7 697.1 698.1 699.1 Ts 3 681.4 682.8 685.2 8.789 9.069 693.3 696.7 8.769 694.1 7.669 **Ts 2** 671.3 6.11.9 674.3 676.2 678.4 679.7 681.3 682.0 682.8 683.3 684.0 684.8 685.0 673.1 682.0 6.879 682.0 Ts 1 663.7 664.9 665.1 666.5 669.7 672.9 674.7 8.9/9 678.4 681.2 683.2 **DATE: 26 MAY 1993** FILE: 146CG-1.DAT MIN:SEC 33:30 34: 0 34:30 34:45 35: 0 35:15 35:30 35:45 36: 0 36:15 36:30

527.6

526.7

529.2 530.2 531.5

528.1

535.2 536.5

528.3 528.5 529.5

707.3

706.5 707.2 707.6 708.4 709.3

696.5 697.5

718.4

6.807

6.669 700.6 701.0

700.1

685.7 686.5

683.9

36:45

719.1

8.602

700.4 701.8

684.5

708.5 9.601

532.7 533.7 538.2 539.2

710.4

9.669 699.5 700.6

719.4 720.7 721.1

710.5 711.3 712.1

702.1

702.5

702.1

687.9 689.2

686.1 687.3

687.1

9.989

37:15 37:30 37:45

529.4

712.1

537.1

DATE FILE:

5592 7(13)

E: 146CG-1.DAT											
MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
					:						
38: 0	688.2	9.689	704.2	702.4	713.1	721.8	702.0	710.1	713.7	529.6	541.1
38:15	689.5	690.1	704.6	702.9	714.3	722.7	703.3	711.3	715.4	530.0	542.3
38:30	9.069	8.069	706.2	703.8	715.5	723.2	705.4	712.6	717.0	530.0	543.2
38:45	692.6	691.9	707.5	704.7	716.8	723.9	706.7	713.9	719.0	531.2	543.6
39: 0	694.0	693.3	708.9	705.6	718.2	725.1	708.7	715.4	720.9	532.3	544.2
39:15	8.569	694.9	710.5	9.902	719.2	726.1	8.602	716.5	722.3	533.5	545.6
39:30	697.1	696.5	711.7	707.5	720.4	727.0	711.9	717.8	723.6	533.6	546.4
39:45	698.2	8.969	712.9	708.4	721.5	727.5	713.8	718.7	725.6	535.0	547.9
40: 0	700.1	697.4	714.3	6.807	722.2	728.3	714.4	719.8	726.8	536.6	549.7
40:15	701.7	700.4	714.9	709.1	722.8	729.1	715.0	0.0	728.1	538.0	551.2
40:30	703.4	721.2	715.7	710.1	720.9	729.6	714.2	0.0	728.2	539.6	557.1
40:45	701.9	724.9	712.6	8.602	0.0	717.8	711.1	0.0	724.9	539.5	559.1
41: 0	6.669	724.5	6.607	706.2	0.0	712.8	706.4	0.0	719.3	538.0	555.9
41:15	696.3	722.6	705.8	702.8	0.0	708.6	1.669	0.0	712.7	535.2	553.7

TEST NO. 2

COAST GUARD FURNACE TEMPERATURES (°C) AND PRESSURE (Pa) TEST NO. 2

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
0: 0	58.8	59.8	58.3	58.6	56.4	58.4	-34.9
0:15	132.6	144.6	128.2	129.1	110.3	129.0	132.0
0:30	423.3	444.7	422.0	449.5	450.3	437.9	-34.9
0:45	563.8	576.4	531.7	564.0	725.8	592.3	12.5
1: 0	588.3	612.4	585.0	579.1	697.2	612.4	-10.0
1:15	543.9	562.9	568.3	520.0	563.9	551.8	-2.5
1:30	534.9	560.7	554.4	517.9	539.4	541.5	10.0
1:45	528.3	549.2	544.2	497.1	521.5	528.1	10.0
2: 0	526.4	547.9	542.2	494.4	504.8	523.1	5.0
2:15	530.4	552.0	545.1	507.2	515.7	530.1	5.0
2:30	524.0	554.7	546.5	510.3	518.1	530.7	2.5
2:45	539.4	561.1	549.8	514.8	520.9	537.2	7.5
3: 0	534.6	554.7	544.0	508.8	520.7	532.6	7.5
3:15	546.0	556.1	550.2	519.1	528.3	539.9	7.5
3:30	542.0	561.6	551.3	530.2	527.2	542.4	7.5
3:45	547.2	566.6	558.3	530.0	529.9	546.4	5.0
4: 0	551.2	581.9	566.8	535.0	543.2	555.6	7.5
4:15	562.8	583.7	570.5	549.5	552.0	563.7	7.5
4:30	570.0	587.7	576.9	563.8	556.1	570.9	7.5
4:45	570.2	596.7	582.5	551.9	562.2	572.7	12.5
5: 0	582.4	607.9	597.9	572.2	577.7	587.6	12.5
5:15	597.9	615.6	605.5	579.5	588.8	597.5	10.0
5:30	595.9	621.5	612.9	593.5	592.3	603.2	10.0
5:45	604.4	630.4	621.2	598.8	600.9	611.1	10.0
6: 0	613.0	637.9	629.0	606.5	609.1	619.1	10.0
6:15	616.5	645.5	631.9	599.9	611.9	621.1	10.0
6:30	625.7	651.2	646.1	608.4	626.7	631.6	12.5

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
6:45	629.9	660.6	651.1	620.2	636.2	639.6	12.5
7: 0	642.1	662.3	652.7	622.2	634.3	642.7	17.4
7:15	647.1	665.2	659.6	631.0	644.5	649.5	14.9
7:30	651.4	677.0	669.9	639.5	654.5	658.4	12.5
7:45	662.0	681.5	670.6	649.3	657.0	664.1	12.5
8: 0	651.8	684.1	674.2	644.7	663.7	663.7	7.5
8:15	669.2	685.6	679.5	653.4	674.4	672.4	10.0
8:30	670.6	693.1	684.2	651.9	673.8	674.7	10.0
8:45	669.1	696.4	687.5	659.5	677.9	678.1	7.5
9: 0	679.1	698.5	688.5	659.5	673.7	679.9	10.0
9:15	668.0	702.0	689.5	661.0	678.9	679.9	10.0
9:30	685.5	710.3	701.2	659.7	704.0	692.2	10.0
9:45	680.9	705.6	704.4	668.2	703.6	692.5	10.0
10: 0	697.3	714.6	707.3	682.1	703.2	700.9	10.0
10:15	689.6	724.6	721.3	685.0	720.9	708.3	12.5
10:30	693.8	727.0	718.1	683.9	713.1	707.2	10.0
10:45	701.7	722.0	715.8	692.9	722.3	711.0	10.0
11: 0	703.7	728.0	720.4	686.1	722.8	712.2	10.0
11:15	713.8	729.6	723.0	690.8	718.4	715.1	10.0
11:30	708.6	730.7	725.9	694.3	721.5	716.2	7.5
11:45	711.1	734.2	730.9	694.3	726.5	719.4	12.5
12: 0	718.8	737.2	737.2	703.7	729.9	725.4	10.0
12:15	716.3	739.1	735.1	698.3	727.3	723.2	12.5
12:30	719.0	744.1	738.9	705.6	740.8	729.7	10.0
12:45	719.1	745.1	742.1	707.0	734.5	729.6	12.5
13: 0	724.6	747.7	747.1	716.9	748.7	737.0	10.0
13:15	728.1	750.4	746.7	715.7	743.8	736.9	10.0

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
13:30	738.3	755.5	748.2	715.3	752.8	742.0	10.0
13:45	728.9	754.8	750.4	720.8	753.1	741.6	10.0
14: 0	720.5	757.7	756.4	725.4	752.9	742.6	10.0
14:15	734.2	763.5	757.3	725.4	763.6	748.8	12.5
14:30	747.8	763.9	760.9	729.1	764.3	753.2	10.0
14:45	739.7	765.9	759.9	735.7	765.7	753.4	10.0
15: 0	746.9	768.3	765.9	728.3	765.2	754.9	12.5
15:15	745.4	768.9	766.0	733.1	772.1	757.1	10.0
15:30	756.1	772.8	772.3	735.2	774.7	762.2	7.5
15:45	750.7	779.9	776.4	737.7	779.8	764.9	10.0
16: 0	755.0	781.5	776.1	751.2	781.1	769.0	7.5
16:15	756.9	780.6	778.3	747.5	784.9	769.6	10.0
16:30	763.5	784.2	781.2	748.1	789.0	773.2	10.0
16:45	759.1	787.4	783.0	755.9	787.6	774.6	12.5
17: 0	752.7	790.0	785.3	754.3	792.5	775.0	10.0
17:15	753.9	792.7	786.2	755.5	793.1	776.3	10.0
17:30	768.7	795.3	786.0	768.5	790.3	781.8	10.0
17:45	766.6	800.4	793.4	772.5	800.5	786.7	10.0
18: 0	773.8	798.4	790.9	771.5	792.9	785.5	10.0
18:15	773.5	798.1	798.4	770.9	799.4	788.0	12.5
18:30	767.2	800.7	801.8	768.4	804.5	788.5	12.5
18:45	775.0	802.5	801.8	775.7	801.7	791.4	10.0
19: 0	769.5	807.4	806.0	775.6	805.8	792.8	7.5
19:15	772.6	811.0	808.1	780.2	810.3	796.5	7.5
19:30	787.1	815.1	807.4	788.2	802.4	800.0	10.0
19:45	795.9	815.8	807.7	801.5	807.5	805.7	7.5
20: 0	785.3	816.7	812.1	789.5	809.0	802.5	5.0

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
20:15	793.2	815.9	809.2	807.3	812.3	807.6	10.0
20:30	788.7	819.5	813.0	797.5	809.3	805.6	10.0
20:45	790.7	812.6	812.5	794.3	816.3	805.3	10.0
21: 0	793.0	820.7	815.0	787.4	818.1	806.9	12.5
21:15	795.4	822.1	815.1	808.5	813.1	810.8	10.0
21:30	799.6	819.7	822.0	807.2	812.4	812.2	7.5
21:45	795.3	820.4	815.0	794.1	817.9	808.5	10.0
22: 0	803.6	824.3	821.2	805.0	820.5	814.9	10.0
22:15	802.0	827.1	819.0	821.5	815.0	816.9	10.0
22:30	797.4	829.3	826.1	810.3	814.7	815.5	7.5
22:45	799.7	830.4	826.1	807.3	821.2	816.9	10.0
23: 0	804.8	831.7	827.0	824.4	818.4	821.3	7.5
23:15	804.7	826.8	825.9	808.6	824.8	818.2	10.0
23:30	799.1	832.4	826.8	813.7	821.0	818.6	7.5
23:45	799.0	831.5	830.5	817.8	828.5	821.5	10.0
24: 0	807.2	834.4	827.5	809.2	821.8	820.0	12.5
24:15	808.4	831.4	829.6	801.0	831.0	820.3	5.0
24:30	798.1	833.4	828.2	804.4	831.1	819.0	10.0
24:45	809.5	837.8	830.2	813.2	829.6	824.1	10.0
25: 0	810.5	835.5	829.6	817.2	824.3	823.4	10.0
25:15	804.0	837.5	838.0	826.6	821.5	825.5	10.0
25:30	809.9	840.7	839.8	828.4	828.3	829.4	7.5
25:45	815.4	841.6	836.9	833.9	831.1	831.8	10.0
26: 0	818.4	845.9	839.9	835.1	829.8	833.8	10.0
26:15	811.4	848.3	841.2	837.5	821.9	832.1	10.0
26:30	817.2	845.1	840.9	850.3	832.3	837.1	7.5
26:45	825.1	845.0	840.8	845.1	831.1	837.4	12.5

DATE: 26 MAY 1993 SWRI PROJECT NO.: 01-5592 FILE: 146CG-2.DAT TEST TYPE: IMO RES.A.517(13)

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
27: 0	822.9	853.0	851.2	850.5	832.8	842.1	12.5
27:15	823.1	851.6	854.2	849.8	837.3	843.2	7.5
27:30	813.9	851.5	856.0	853.2	835.1	841.9	7.5
27:45	815.7	856.7	850.8	853.0	837.9	842.8	10.0
28: 0	828.6	856.7	857.9	852.6	832.4	845.6	10.0
28:15	819.9	861.1	856.6	850.1	834.3	844.4	10.0
28:30	821.2	862.8	860.3	844.9	837.6	845.4	10.0
28:45	828.5	858.5	862.2	854.0	839.7	848.6	10.0
29: 0	834.8	865.4	861.9	860.3	842.1	852.9	10.0
29:15	837.5	867.7	864.1	862.2	846.2	855.5	10.0
29:30	833.1	870.1	862.3	863.2	844.1	854.6	10.0
29:45	832.7	872.4	870.9	857.5	848.3	856.4	12.5
30: 0	840.6	875.9	874.9	862.2	849.2	860.5	12.5
30:15	837.4	880.6	875.8	853.8	853.8	860.3	12.5
30:30	840.1	884.8	881.9	869.8	855.8	866.5	7.5
30:45	845.5	882.4	888.4	863.5	858.6	867.7	12.5
31: 0	847.6	886.2	891.4	868.2	857.7	870.2	10.0
31:15	849.5	891.8	887.7	854.9	859.2	868.6	12.5
31:30	842.4	891.9	883.8	864.3	863.1	869.1	12.5
31:45	849.4	896.5	890.6	868.2	866.8	874.3	12.5
32: 0	853.0	895.4	891.1	875.1	866.5	876.2	10.0
32:15	853.5	894.1	896.4	878.4	864.8	877.5	10.0
32:30	858.5	897.1	891.4	881.8	866.9	879.1	10.0
32:45	851.5	899.4	894.1	868.9	870.4	876.9	10.0
33: 0	857.3	901.8	900.0	880.0	867.5	881.3	12.5
33:15	855.7	900.9	894.1	877.7	871.3	880.0	5.0
33:30	855.5	902.6	903.5	877.5	868.5	881.5	12.5

DATE: 26 MAY 1993 SWRI PROJECT NO.: 01-5592 FILE: 146CG-2.DAT TEST TYPE: IMO RES.A.517(13)

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
33:45	854.5	897.6	901.5	881.4	868.7	880.7	10.0
34: 0	861.2	901.0	897.9	875.2	873.8	881.8	10.0
34:15	858.0	900.3	903.7	876.9	877.1	883.2	10.0
34:30	864.0	903.0	899.3	889.6	872.3	885.6	10.0
34:45	864.7	904.4	900.9	891.8	874.3	887.2	10.0
35: 0	862.3	904.5	903.4	884.1	876.4	886.1	10.0
35:15	860.5	904.7	906.2	888.7	875.0	887.0	12.5
35:30	863.0	907.2	902.1	893.5	876.2	888.4	10.0
35:45	860.4	909.0	903.3	874.4	878.8	885.2	10.0
36: 0	861.8	907.5	901.3	897.2	879.9	889.5	10.0
36:15	862.9	908.6	903.2	888.6	876.6	888.0	7.5
36:30	864.5	906.8	906.8	895.0	875.7	889.8	7.5
36:45	871.5	911.2	904.3	894.9	872.5	890.9	7.5
37: 0	873.3	908.1	905.1	886.1	869.7	888.5	0.0
37:15	876.7	903.1	896.6	880.2	867.2	884.8	0.0
37:30	871.6	889.0	869.7	858.2	742.3	846.2	2.5
37:45	861.3	878.5	843.2	828.3	710.2	824.3	-2.5

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MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5		
0: 0	0.1	0.1	0.1	0.0	0.1		
0:15	0.3	0.3	0.3	0.2	0.3		
0:30	2.2	2.5	1.9	1.8	2.3		
0:45	3.4	3.7	2.9	2.8	3.9		
1: 0	3.4	3.4	2.6	2.3	3.0		
1:15	2.4	2.4	1.8	1.5	2.2		
1:30	2.5	2.5	1.9	1.5	2.4		
1:45	2.5	2.4	1.9	1.3	2.3		
2: 0	2.7	2.7	2.1	1.4	2.5		
2:15	3.0	3.0	2.3	1.5	2.8		
2:30	3.2	3.2	2.5	1.6	3.0		
2:45	3.4	3.5	2.7	1.7	3.2		
3: 0	3.7	3.7	2.8	1.8	3.4		
3:15	3.9	4.0	3.0	1.8	3.6		
3:30	4.2	4.3	3.3	2.0	3.9		
3:45	4.5	4.6	3.5	2.2	4.2		
4: 0	4.9	5.1	3.9	2.4	4.6		
4:15	5.2	5.4	4.2	2.6	4.9		
4:30	5.6	5.8	4.5	2.8	5.3		
4:45	5.9	6.2	4.8	3.0	5.6		
5: 0	6.4	6.8	5.3	3.4	6.2		
5:15	6.9	7.3	5.7	3.7	6.6		
5:30	7.4	7.8	6.0	4.0	7.0		
5:45	7.9	8.3	6.5	4.3	7.5		
6: 0	8.4	8.8	6.9	4.6	8.0		
6:15	8.9	9.4	7.4	5.0	8.5		
6:30	9.4	10.0	7.9	5.4	9.1		

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
6:45	9.9	10.5	8.3	5.7	9.5
7: 0	10.4	11.0	8.7	6.0	10.0
7:15	11.0	11.6	9.2	6.4	10.6
7:30	11.6	12.2	9.7	6.8	11.2
7:45	12.0	12.7	10.1	7.1	11.6
8: 0	12.6	13.3	10.5	7.4	12.0
8:15	13.0	13.7	10.9	7.8	12.5
8:30	13.5	14.2	11.4	8.1	12.9
8:45	13.9	14.7	11.8	8.4	13.4
9: 0	14.3	15.1	12.1	8.7	13.8
9:15	14.8	15.6	12.5	9.0	14.2
9:30	15.3	16.2	13.0	9.4	14.8
9:45	15.8	16.7	13.5	9.8	15.2
10: 0	16.2	17.2	13.9	10.1	15.7
10:15	16.8	17.8	14.4	10.6	16.4
10:30	17.2	18.2	14.8	10.9	16.7
10:45	17.6	18.6	15.1	11.1	17.0
11: 0	17.9	19.0	15.4	11.4	17.3
11:15	18.3	19.3	15.8	11.6	17.7
11:30	18.6	19.7	16.1	11.9	18.0
11:45	19.0	20.2	16.4	12.2	18.5
12: 0	19.3	20.5	16.8	12.5	18.9
12:15	19.7	20.8	17.1	12.8	19.1
12:30	20.1	21.2	17.4	13.0	19.5
12:45	20.4	21.5	17.8	13.3	19.8
13: 0	20.8	22.0	18.2	13.7	20.3
13:15	21.2	22.4	18.5	13.9	20.6

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
13:30	21.5	22.7	18.8	14.2	21.0
13:45	21.8	23.0	19.1	14.4	21.2
14: 0	22.1	23.3	19.4	14.7	21.6
14:15	22.5	23.7	19.7	15.0	22.0
14:30	22.8	24.0	20.1	15.2	22.3
14:45	23.0	24.3	20.3	15.4	22.6
15: 0	23.3	24.6	20.6	15.7	22.9
15:15	23.7	25.0	21.0	16.1	23.3
15:30	24.1	25.4	21.4	16.4	23.8
15:45	24.5	25.8	21.8	16.8	24.2
16: 0	24.8	26.1	22.1	17.0	24.5
16:15	25.1	26.5	22.4	17.3	24.8
16:30	25.5	26.8	22.7	17.5	25.1
16:45	25.7	27.1	23.0	17.8	25.5
17: 0	26.1	27.3	23.2	18.0	25.6
17:15	26.2	27.6	23.5	18.2	26.0
17:30	26.7	28.0	23.9	18.6	26.5
17:45	27.0	28.4	24.2	18.9	26.9
18: 0	27.4	28.8	24.5	19.2	27.2
18:15	27.6	29.0	24.8	19.4	27.4
18:30	27.9	29.3	25.1	19.6	27.7
18:45	28.1	29.6	25.3	19.9	28.0
19: 0	28.5	30.0	25.6	20.1	28.3
19:15	28.8	30.3	25.9	20.4	28.7
19:30	29.2	30.6	26.3	20.7	29.1
19:45	29.5	30.9	26.5	20.9	29.4
20: 0	29.8	31.1	26.7	21.1	29.6

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

1 1711 000 0	D 14	D 14	D. 12	D- 3.4	D-45
MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
20:15	30.0	31.3	26.9	21.3	29.9
20:30	30.3	31.6	27.2	21.5	30.2
20:45	30.4	31.7	27.3	21.6	30.4
21: 0	30.6	32.0	27.5	21.8	30.5
21:15	30.8	32.2	27.7	21.9	30.8
21:30	30.9	32.4	27.8	22.0	30.8
21:45	31.1	32.5	28.0	22.2	31.0
22: 0	31.3	32.8	28.2	22.4	31.4
22:15	31.7	33.1	28.5	22.7	31.7
22:30	31.9	33.4	28.7	22.9	31.8
22:45	32.0	33.5	28.8	23.0	32.1
23: 0	32.3	33.8	29.0	23.2	32.3
23:15	32.5	34.0	29.2	23.4	32.4
23:30	32.6	34.1	29.3	23.4	32.6
23:45	32.8	34.3	29.5	23.6	32.8
24: 0	33.0	34.5	29.7	23.7	32.9
24:15	33.1	34.7	29.8	23.9	33.0
24:30	33.2	34.7	29.9	23.9	33.2
24:45	33.4	34.9	30.1	24.1	33.3
25: 0	33.5	35.1	30.2	24.2	33.4
25:15	33.7	35.3	30.5	24.5	33.7
25:30	33.9	35.7	30.8	24.8	34.0
25:45	34.3	35.9	31.0	24.9	34.1
26: 0	34.4	36.2	31.1	25.1	34.3
26:15	34.6	36.3	31.3	25.2	34.5
26:30	34.8	36.6	31.5	25.5	34.8
26:45	35.0	36.8	31.7	25.6	35.1

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
27: 0	35.4	37.4	32.2	26.1	35.7
27:15	35.6	37.6	32.4	26.3	35.9
27:30	35.8	37.9	32.6	26.5	36.1
27:45	36.1	38.2	32.9	26.7	36.5
28: 0	36.2	38.5	33.1	26.9	36.6
28:15	36.6	38.9	33.4	27.1	37.0
28:30	36.7	39.2	33.6	27.4	37.3
28:45	36.8	39.3	33.8	27.5	37.5
29: 0	37.3	39.7	34.2	27.9	37.8
29:15	37.5	40.1	34.5	28.2	38.3
29:30	37.7	40.6	34.8	28.5	38.6
29:45	38.3	41.0	35.2	28.8	39.1
30: 0	38.7	41.6	35.6	29.2	39.5
30:15	39.1	41.9	36.0	29.5	39.8
30:30	39.7	42.8	36.5	30.1	40.5
30:45	40.1	43.4	37.1	30.6	41.1
31: 0	40.6	43.8	37.5	30.9	41.4
31:15	41.1	44.1	37.7	31.2	41.7
31:30	41.4	44.5	38.1	31.5	42.1
31:45	41.8	45.0	38.4	31.8	42.5
32: 0	42.0	45.2	38.6	32.0	42.7
32:15	42.2	45.4	38.8	32.2	42.9
32:30	42.5	45.7	39.1	32.4	43.2
32:45	42.7	45.9	39.3	32.6	43.4
33: 0	42.9	46.2	39.6	32.8	43.6
33:15	43.2	46.3	39.8	33.0	43.8
33:30	43.3	46.6	39.9	33.1	44.0

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5	
33:45	43.4	46.7	40.0	33.2	44.1	
34: 0	43.7	46.9	40.3	33.4	44.4	
34:15	43.8	47.0	40.5	33.6	44.5	
34:30	43.9	47.4	40.6	33.7	44.8	
34:45	44.1	47.4	40.7	33.9	44.9	
35: 0	44.4	47.5	40.9	34.0	45.0	
35:15	44.3	47.6	41.0	34.1	45.1	
35:30	44.5	47.9	41.3	34.3	45.5	
35:45	44.6	48.0	41.4	34.4	45.5	
36: 0	44.7	48.0	41.6	34.5	45.6	
36:15	44.7	48.3	41.7	34.7	45.7	
36:30	45.0	48.5	41.9	34.8	45.7	
36:45	45.0	48.6	42.1	35.0	45.7	
37: 0	45.9	48.4	42.4	35.2	45.6	
37:15	45.9	67.9	49.4	40.1	45.1	
37:30	45.6	68.4	48.2	38.7	44.8	
37:45	44.9	63.8	45.1	36.0	41.8	

COAST GUARD HEAT FLUX BODY TEMPERATURES (*C) TEST NO. 2

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
0: 0	25.3	25.2	25.2	25.2	25.2
0:15	25.3	25.2	25.2	25.2	25.1
0:30	25.3	25.2	25.2	25.2	25.1
0:45	25.3	25.3	25.3	25.3	25.1
1: 0	25.3	25.3	25.3	25.3	25.2
1:15	25.3	25.2	25.3	25.3	25.2
1:30	25.3	25.2	25.3	25.3	25.2
1:45	25.3	25.2	25.3	25.3	25.1
2: 0	25.3	25.2	25.3	25.3	25.1
2:15	25.3	25.2	25.3	25.3	25.2
2:30	25.3	25.2	25.3	25.3	25.1
2:45	25.3	25.3	25.3	25.3	25.1
3: 0	25.3	25.2	25.3	25.3	25.2
3:15	25.3	25.3	25.3	25.3	25.2
3:30	25.4	25.3	25.3	25.3	25.2
3:45	25.4	25.3	25.3	25.3	25.2
4: 0	25.4	25.3	25.3	25.3	25.2
4:15	25.4	25.3	25.3	25.3	25.2
4:30	25.3	25.3	25.3	25.3	25.2
4:45	25.4	25.3	25.4	25.3	25.2
5: 0	25.4	25.3	25.4	25.3	25.2
5:15	25.4	25.3	25.4	25.4	25.2
5:30	25.4	25.3	25.4	25.4	25.2
5:45	25.4	25.3	25.4	25.4	25.2
6: 0	25.5	25.3	25.5	25.4	25.2
6:15	25.5	25.4	25.5	25.5	25.3
6:30	25.5	25.4	25.6	25.5	25.3

COAST GUARD HEAT FLUX BODY TEMPERATURES (*C) TEST NO. 2

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
6:45	25.5	25.4	25.6	25.5	25.3
7: 0	25.6	25.4	25.6	25.6	25.3
7:15	25.6	25.4	25.6	25.6	25.3
7:30	25.6	25.5	25.7	25.6	25.3
7:45	25.6	25.5	25.7	25.6	25.4
8: 0	25.6	25.5	25.7	25.7	25.4
8:15	25.7	25.5	25.8	25.7	25.4
8:30	25.7	25.6	25.8	25.7	25.4
8:45	25.7	25.6	25.8	25.7	25.4
9: 0	25.7	25.6	25.9	25.8	25.5
9:15	25.8	25.6	25.9	25.8	25.5
9:30	25.8	25.7	25.9	25.8	25.5
9:45	25.8	25.7	26.0	25.9	25.5
10: 0	25.9	25.7	26.0	25.9	25.5
10:15	25.9	25.7	26.0	25.9	25.6
10:30	25.9	25.8	26.1	26.0	25.6
10:45	26.0	25.8	26.1	26.0	25.6
11: 0	26.0	25.8	26.2	26.0	25.7
11:15	26.0	25.8	26.2	26.1	25.7
11:30	26.0	25.9	26.2	26.1	25.7
11:45	26.1	25.9	26.3	26.1	25.7
12: 0	26.1	25.9	26.3	26.2	25.7
12:15	26.2	26.0	26.3	26.2	25.8
12:30	26.2	26.0	26.4	26.2	25.8
12:45	26.3	26.0	26.4	26.3	25.8
13: 0	26.2	26.0	26.5	26.3	25.9
13:15	26.3	26.1	26.5	26.4	25.9

COAST GUARD HEAT FLUX BODY TEMPERATURES (°C) TEST NO. 2

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

	MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
_						
	13:30	26.4	26.1	26.6	26.4	25.9
	13:45	26.4	26.1	26.6	26.5	26.0
	14: 0	26.4	26.2	26.6	26.5	26.0
	14:15	26.4	26.2	26.7	26.5	26.0
	14:30	26.5	26.2	26.7	26.5	26.0
	14:45	26.5	26.2	26.7	26.5	26.0
	15: 0	26.6	26.3	26.8	26.6	26.1
	15:15	26.5	26.3	26.8	26.6	26.1
	15:30	26.6	26.3	26.8	26.6	26.1
	15:45	26.6	26.3	26.8	26.6	26.1
	16: 0	26.6	26.3	26.9	26.7	26.1
	16:15	26.6	26.3	26.9	26.7	26.1
	16:30	26.7	26.4	27.0	26.7	26.2
	16:45	26.7	26.4	27.0	26.8	26.2
	17: 0	26.7	26.4	27.0	26.8	26.2
	17:15	26.7	26.4	27.0	26.8	26.2
	17:30	26.8	26.5	27.1	26.9	26.3
	17:45	26.8	26.5	27.1	26.9	26.3
	18: 0	26.8	26.5	27.1	26.9	26.3
	18:15	26.9	26.5	27.2	27.0	26.3
	18:30	26.9	26.6	27.2	27.0	26.4
	18:45	26.9	26.6	27.3	27.0	26.4
	19: 0	27.0	26.6	27.3	27.1	26.4
	19:15	27.0	26.6	27.3	27.1	26.4
	19:30	27.0	26.7	27.3	27.1	26.4
	19:45	27.0	26.7	27.4	27.2	26.4
	20: 0	27.1	26.7	27.4	27.2	26.5

COAST GUARD HEAT FLUX BODY TEMPERATURES (*C) TEST NO. 2

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
20:15	27.1	26.7	27.4	27.2	26.5
20:30	27.2	26.7	27.5	27.3	26.5
20:45	27.2	26.8	27.5	27.3	26.6
21: 0	27.2	26.8	27.6	27.3	26.6
21:15	27.2	26.8	27.5	27.3	26.6
21:30	27.2	26.9	27.6	27.4	26.6
21:45	27.3	26.9	27.6	27.4	26.6
22: 0	27.3	26.9	27.6	27.4	26.7
22:15	27.4	26.9	27.7	27.5	26.7
22:30	27.3	26.9	27.7	27.5	26.7
22:45	27.4	27.0	27.7	27.5	26.7
23: 0	27.4	27.0	27.7	27.5	26.7
23:15	27.4	27.0	27.8	27.5	26.7
23:30	27.4	27.0	27.7	27.5	26.7
23:45	27.4	27.0	27.8	27.6	26.7
24: 0	27.5	27.0	27.8	27.6	26.7
24:15	27.5	27.0	27.8	27.6	26.7
24:30	27.5	27.0	27.8	27.6	26.8
24:45	27.5	27.0	27.8	27.6	26.8
25: 0	27.5	27.0	27.8	27.6	26.7
25:15	27.5	27.0	27.8	27.6	26.8
25:30	27.5	27.0	27.9	27.6	26.8
25:45	27.5	27.0	27.9	27.6	26.8
26: 0	27.5	27.1	27.8	27.6	26.8
26:15	27.5	27.1	27.9	27.7	26.8
26:30	27.5	27.1	27.9	27.6	26.8
26:45	27.5	27.1	27.9	27.7	26.8

COAST GUARD HEAT FLUX BODY TEMPERATURES (°C) TEST NO. 2

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
27: 0	27.5	27.1	27.9	27.6	26.8
27:15	27.6	27.1	27.9	27.7	26.8
27:30	27.6	27.1	28.0	27.7	26.8
27:45	27.6	27.1	27.9	27.7	26.8
28: 0	27.6	27.1	27.9	27.7	26.8
28:15	27.6	27.1	27.9	27.7	26.8
28:30	27.6	27.1	27.9	27.7	26.8
28:45	27.6	27.1	27.9	27.7	26.8
29: 0	27.6	27.1	28.0	27.7	26.8
29:15	27.6	27.1	27.9	27.7	26.8
29:30	27.6	27.1	28.0	27.8	26.8
29:45	27.6	27.1	28.0	27.7	26.8
30: 0	27.6	27.1	28.0	27.7	26.8
30:15	27.6	27.1	28.0	27.8	26.9
30:30	27.6	27.1	28.0	27.8	26.9
30:45	27.6	27.1	28.0	27.8	26.9
31: 0	27.7	27.1	28.1	27.9	26.9
31:15	27.7	27.2	28.1	27.8	26.9
31:30	27.7	27.2	28.2	27.9	26.9
31:45	27.7	27.2	28.2	27.9	26.9
32: 0	27.8	27.3	28.2	27.9	27.0
32:15	27.8	27.3	28.2	27.9	27.0
32:30	27.8	27.3	28.2	28.0	27.0
32:45	27.8	27.3	28.2	28.0	27.0
33: 0	27.8	27.3	28.2	28.0	27.0
33:15	27.8	27.3	28.3	28.0	27.1
33:30	27.8	27.3	28.3	28.0	27.0

COAST GUARD HEAT FLUX BODY TEMPERATURES (*C) TEST NO. 2

DATE: 26 MAY 1993 FILE: 146CG-2.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
33:45	27.9	27.3	28.3	28.1	27.1
34: 0	27.9	27.4	28.4	28.1	27.1
34:15	27.9	27.4	28.4	28.2	27.1
34:30	27.9	27.4	28.4	28.2	27.1
34:45	28.0	27.4	28.4	28.2	27.1
35: 0	27.9	27.4	28.4	28.2	27.1
35:15	28.0	27.4	28.4	28.2	27.1
35:30	28.0	27.5	28.5	28.3	27.1
35:45	28.0	27.4	28.5	28.2	27.2
36: 0	28.0	27.5	28.5	28.3	27.1
36:15	28.1	27.5	28.5	28.3	27.2
36:30	28.1	27.5	28.6	28.3	27.2
36:45	28.0	27.5	28.6	28.3	27.2
37: 0	28.0	27.5	28.5	28.3	27.1
37:15	28.1	27.5	28.6	28.4	27.2
37:30	28.0	27.5	28.6	28.4	27.2
37:45	28.1	27.6	28.6	28.4	27.2

SURFACE TEMPERATURES (°C) COAST GUARD TEST NO. 2

Ts 11

35.0 35.0 35.4 38.8

36.4

45.8 50.5

41.7

0.09 66.3 72.6 79.3 86.7

54.7

SWRI PROJECT NO.: 01-5592 **TEST TYPE: IMO RES.A.517(13)** Ts 10 105.8 112.0 35.4 35.5 35.7 36.3 38.2 44.8 48.9 53.0 57.6 62.6 74.0 80.0 99.5 68.3 93.1 86.1 102.0 147.3 174.2 9.661 211.3 6 118.2 133.3 160.3 186.7 222.4 232.9 266.4 37.5 37.8 43.4 59.3 82.2 255.1 244.1 S ∞ 110.8 127.2 139.5 151.7 165.3 178.5 191.0 203.0 214.4 225.2 235.9 246.5 268.0 37.6 38.0 44.0 67.9 7.68 257.1 Ls Ts 7 127.0 37.2 148.6 173.5 185.4 6.96 227.6 238.0 113.8 161.1 207.2 248.2 37.0 37.3 79.0 7.86 217.1 56.1 Ts 6 178.5 192.9 101.4 119.4 136.2 148.8 163.7 218.5 241.5 275.6 252.8 264.1 37.7 38.1 43.8 59.3 81.2 206.1 230.1 Ts 5 194.6 101.3 116.6 124.8 136.3 148.2 160.0 172.3 183.9 204.7 214.4 224.2 234.0 244.0 37.8 44.0 59.9 81.9 **Ts 4** 115.0 128.6 141.0 154.7 67.9 193.2 216.5 238.0 248.9 259.9 180.7 205.1 227.3 37.2 37.5 42.7 57.6 78.8 98.3 Ts 3 132.0 58.6 116.2 44.4 172.2 185.1 210.3 231.9 242.8 253.6 264.8 36.8 42.6 57.9 79.5 198.1 221.1 37.1 99.2 Ts 2 184.5 113.2 144.0 208.5 228.9 157.7 171.7 196.7 239.2 260.3 36.6 36.8 56.3 6.97 96.2 129.1 219.1 249.7 Ts 1 8.601 123.8 147.9 183.3 195.3 206.5 137.1 159.4 171.3 217.7 228.8 239.7 250.3 36.4 36.6 41.4 55.5 75.9 94.2 **DATE: 26 MAY 1993** FILE: 146CG-2.DAT MIN:SEC 0:0 0:15 0:30 0:45 1:0 1:15 1:30 1:45 2: 0 2:15 2:30 2:45 3:0 3:15 3:30 3:45 4:15 4:30 4:0

125.8

102.3 110.0 118.0

94.4

SURFACE TEMPERATURES (°C) COAST GUARD TEST NO. 2

Ts 11

133.6

149.9

157.7

165.4

SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13) Ts 10 181.8 197.0 204.5 9.091 9.791 174.5 217.3 118.7 132.3 139.6 146.5 189.1 125.7 153.1 223.1 Ts 9 429.0 276.9 287.9 299.6 311.5 323.5 335.5 346.9 358.3 382.9 395.9 407.8 419.3 436.5 443.1 370.1 369.6 380.8 403.4 428.4 434.6 Ts 8 278.5 289.2 300.4 312.0 323.6 335.4 346.8 358.1 392.3 413.1 421.3 373.8 384.4 405.5 416.5 Ts 7 291.3 302.9 315.3 351.2 362.7 395.1 258.7 269.5 280.5 327.1 427.1 339.1 Ts 6 336.8 363.3 389.9 403.2 415.7 426.3 434.7 441.6 454.3 298.8 323.9 376.7 448.1 287.1 350.1 417.0 334.0 357.9 369.3 381.3 406.5 424.5 286.0 309.2 321.4 346.3 3 254.1 264.5 275.2 297.3 394.1 Ts 414.6 434.6 340.9 365.0 386.8 402.6 425.2 441.5 **Ts 4** 328.8 270.7 281.6 292.7 304.4 316.5 353.1 377.1 Ts 3 358.8 369.6 381.6 392.9 402.4 422.8 431.7 438.8 275.5 298.2 309.6 321.7 346.8 413.1 286.7 335.1 375.9 385.9 395.6 **Ts 2** 313.9 325.4 336.5 347.3 366.9 405.2 414.8 422.5 270.2 291.2 302.2 357.1 280.3 393.5 404.3 424.6 362.5 382.8 Ts 1 261.3 294.4 317.3 329.3 340.4 351.4 372.7 305.4 415.1 283.1 **DATE: 26 MAY 1993** FILE: 146CG-2.DAT MIN:SEC 7:15 7:45 8:15 8:30 6:45 7:30 6:15 6:30 8: 0 4:45 5: 0 5:15 5:30 5:45 6: 0 7:0

0.661 8.907 214.6 222.5 229.2 236.5 242.9

190.3

182.7 174.1

256.5 262.9 269.3

228.9

449.2 455.4

440.6

435.4

460.0 466.0 471.7

429.9 433.3 436.2

446.6 451.8 457.1

444.0 449.9 454.5

429.6

432.3 439.3 445.8

8:45

439.8

9:15

435.1

234.3 241.7

461.5

452.5

448.5

446.7

443.1

249.7

5592 (13)

			,		1		1	í	•	i	
MINISEC	ISI	7 5 1	18.3	4 S	c s I	0 81	181	18.0	189	15 10	118 11
9:30	451.5	4.44.4	460.1	462.4	439.6	477.3	453.8	458.6	467.6	247.5	275.5
9:45	457.6	451.2	466.7	467.8	443.5	483.1	459.6	464.4	473.7	252.1	280.8
10: 0	463.2	456.7	472.8	472.8	448.0	488.8	464.0	469.8	479.7	257.9	286.6
10:15	468.8	463.3	478.7	478.2	453.2	494.5	469.4	476.1	486.0	262.5	292.8
10:30	473.9	469.3	485.0	483.9	457.9	499.8	475.0	481.9	491.5	267.2	299.0
10:45	479.2	475.1	490.6	489.3	462.5	504.6	480.9	487.4	496.9	271.9	306.1
11: 0	486.0	479.2	495.4	494.4	467.3	508.6	486.3	491.6	501.5	279.1	312.7
11:15	493.7	482.3	501.1	499.3	471.1	512.4	491.4	495.6	506.1	286.5	318.2
11:30	497.9	488.2	504.6	503.5	474.7	515.8	496.1	500.4	6.605	290.1	325.8
11:45	502.1	492.8	508.7	506.7	478.1	518.9	500.4	504.1	513.1	294.5	332.7
12: 0	6.905	496.3	510.1	511.0	481.4	521.7	505.5	508.1	516.0	299.3	340.7
12:15	513.4	498.9	514.1	514.3	484.3	524.7	509.2	510.6	518.6	307.0	347.1
12:30	515.2	502.8	519.4	517.0	486.7	527.8	512.4	514.1	521.5	310.6	353.5
12:45	518.1	507.5	523.3	520.2	489.6	530.9	516.6	517.3	524.2	314.6	360.9
13: 0	521.1	510.1	526.0	522.9	492.1	533.8	519.9	520.0	526.7	319.8	368.4
13:15	524.0	512.2	529.3	525.7	494.8	536.8	523.5	522.6	529.5	324.9	375.9
13:30	527.1	513.5	533.4	529.2	497.7	539.8	527.1	525.2	532.9	329.6	383.6
13:45	530.3	518.6	537.0	532.3	500.7	542.4	530.5	528.2	535.4	334.1	391.1

SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13) Ts 11 449.6 450.9 457.4 425.6 440.9 443.2 144.7 447.3 453.4 409.7 413.9 418.4 421.3 429.2 431.7 434.4 438.2 455.1 10 348.2 361.6 396.9 400.7 404.8 409.7 414.4 421.9 426.3 429.4 433.3 354.2 366.8 374.7 380.7 392.7 370.4 387.1 419.1 S Ts 9 575.6 589.0 540.8 543.9 546.3 556.7 559.8 562.6 565.3 570.7 573.0 578.3 583.6 586.4 551.2 548.7 581.1 554.1 568.1 569.0 580.6 Ts 8 535.8 537.9 540.9 543.8 546.7 549.7 552.2 555.3 560.8 563.2 565.7 571.7 574.8 577.4 583.1 533.1 558.1 587.6 Ts 7 534.8 549.0 552.4 555.6 558.6 561.9 565.2 567.8 570.8 574.3 580.5 590.8 536.7 539.0 545.4 577.7 584.1 595.6 **Ts** 6 570.0 573.0 580.6 585.8 593.4 547.8 550.9 553.5 556.3 558.4 561.0 563.9 566.9 575.7 583.1 588.3 590.7 578.1 523.6 526.8 530.0 532.8 535.3 537.7 540.7 543.6 546.3 549.2 552.4 555.2 S 520.4 505.4 507.8 514.7 517.7 510.1 512.1 Ls 547.6 553.6 564.8 566.8 568.8 571.8 574.5 576.5 579.2 582.0 584.4 537.3 539.4 541.7 544.6 550.5 556.5 559.4 562.1 4 Ls 578.6 581.9 589.5 Ts 3 552.9 555.6 559.0 561.5 566.2 569.4 573.3 575.9 580.2 586.1 587.5 592.3 594.2 542.7 546.2 549.3 552.9 557.0 559.2 564.8 570.7 Ts 2 522.2 525.2 529.9 533.5 535.8 539.3 540.4 544.7 547.3 550.4 554.5 562.7 568.4 582.0 563.2 506.5 568.9 570.8 574.2 577.6 578.8 584.8 588.3 537.9 539.0 547.2 549.5 560.7 Ts 1 543.4 545.2 554.3 558.1 **DATE: 26 MAY 1993** FILE: 146CG-2.DAT MIN:SEC 17:15 17:45 18:15 18:30 18:45 16:30 17:30 14:15 14:30 14:45 15: 0 15:15 15:30 15:45 16: 0 16:15 16:45 17:0 18: 0

DATE: 2 FILE: 14

MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
									:		
19: 0	590.2	574.2	597.3	586.7	558.2	598.4	593.7	585.9	591.9	435.6	460.3
19:15	591.7	575.6	8.009	588.7	561.0	601.3	596.5	588.5	594.1	437.7	462.7
19:30	592.4	579.5	602.4	590.4	564.0	603.5	8.865	591.0	596.4	439.1	464.0
19:45	595.1	581.5	605.5	592.2	8.995	605.9	602.0	593.8	598.7	442.7	466.3
20: 0	598.1	581.2	607.5	594.4	269.7	608.2	604.7	596.2	601.4	445.1	468.3
20:15	601.6	585.2	6.809	596.5	572.8	610.5	607.5	599.0	603.4	447.1	469.8
20:30	604.3	589.4	612.6	598.3	575.4	612.9	610.4	601.6	605.4	448.8	473.2
20:45	606.5	590.7	615.3	600.1	577.7	614.4	613.1	603.2	607.2	450.9	475.5
21: 0	608.4	592.2	616.0	601.6	580.1	615.7	614.8	605.1	0.609	453.4	476.5
21:15	609.2	594.3	617.4	603.1	582.1	617.2	616.9	6.909	610.6	454.6	478.2
21:30	609.2	595.6	619.7	604.0	584.0	618.5	617.6	608.3	612.5	456.5	480.3
21:45	8.609	597.4	621.9	9.509	586.1	620.4	6.619	8.609	614.6	456.3	483.8
22: 0	612.8	598.6	624.0	8.909	588.1	621.8	621.4	611.2	616.2	459.4	485.5
22:15	613.6	6.009	626.3	9.809	590.3	623.5	623.6	613.7	618.0	459.5	486.9
22:30	614.5	603.0	627.3	610.2	592.3	625.1	625.6	615.7	6.619	460.0	488.0
22:45	617.3	603.6	629.0	611.6	594.4	627.1	627.6	617.8	621.5	463.1	490.4
23: 0	620.4	605.1	630.4	613.7	596.3	628.4	630.5	619.7	623.4	465.6	491.4
23:15	622.0	607.2	632.1	615.4	598.2	629.8	633.1	621.5	625.1	466.8	493.0
00.00											

SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13) Ts 11 495.8 501.8 502.9 504.5 504.9 508.6 514.5 516.4 497.2 498.8 499.8 505.4 506.3 507.7 509.3 510.4 512.4 512.4 513.4 10 488.6 490.0 470.6 471.9 473.4 475.6 478.2 478.9 478.9 480.0 481.4 483.9 483.4 484.0 485.3 486.6 472.8 469.1 Ls 658.0 Ts 9 636.6 642.9 644.5 645.8 647.8 650.0 653.8 655.7 628.5 629.9 632.6 633.6 635.1 637.7 639.7 641.3 651.7 631.1 655.9 658.5 Ts 8 638.0 639.6 641.9 644.0 646.5 648.9 653.8 624.6 627.4 678.9 630.3 631.5 632.2 633.8 635.8 651.2 626.1 670.4 546.6 620.9 652.8 628.9 661.4 663.4 666.2 668.4 **Ts 7** 636.8 638.3 639.4 642.2 643.7 54.9 648.8 656.3 655.1 **Ts** 6 647.6 662.5 639.6 644.4 645.9 649.2 650.6 652.5 654.5 656.5 658.2 632.9 634.5 637.0 638.4 645.9 660.1 635.7 641.1 615.0 616.6 617.9 619.6 621.9 623.8 625.5 626.8 628.9 S 601.3 602.8 604.5 605.9 607.2 609.3 610.6 613.4 612.1 608.1 Ls 635.2 645.3 647.3 618.6 620.3 621.6 622.9 624.2 625.5 626.6 628.2 629.9 633.8 637.5 639.5 641.3 643.4 631.1 632.1 4 Ls 661.6 Ts 3 635.0 638.6 642.0 643.9 645.2 646.2 647.7 648.9 650.3 652.2 653.3 655.7 657.3 659.2 8.989 639.5 640.4 641.1 622.6 628.4 631.9 634.0 **Ts 2** 614.6 6.919 616.9 619.3 623.5 626.7 629.3 630.8 610.9 616.3 609.4 621.1 624.1 616.1 635.8 637.9 637.8 639.2 644.5 646.8 649.6 652.4 Ts 1 625.1 626.2 627.8 629.8 631.2 631.8 633.1 642.1 644.4 646.1 651.1 **DATE: 26 MAY 1993** FILE: 146CG-2.DAT MIN:SEC 28:15 26:15 26:45 27:15 27:30 27:45 25:15 25:30 25:45 26:30 28: 0 23:45 24: 0 24:30 24:45 25: 0 26: 0 27: 0

5592 (13)

MINISEC TS1 TS2 TS4 TS5 TS6 TS6 TS6 TS9												
622.9 635.9 663.0 649.0 630.7 664.5 672.0 660.4 660.2 490.6 654.1 636.5 664.4 651.3 632.8 666.2 672.0 660.4 660.2 490.6 657.7 638.2 664.4 651.3 632.8 669.9 679.4 667.0 692.1 491.1 660.1 640.6 688.4 655.4 636.8 669.9 679.4 667.0 692.4 492.2 661.8 641.3 670.4 657.4 639.2 672.3 682.0 670.2 697.8 493.4 661.8 641.3 670.4 671.3 682.0 671.3 682.0 670.8 493.1 661.8 641.3 670.4 637.3 641.8 679.5 688.0 677.6 496.3 663.5 644.0 675.5 662.1 643.0 671.3 683.9 673.0 671.6 673.0 671.6 683.9 671.6 683.9 671.	MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
652.9 635.9 663.0 649.0 664.5 672.0 660.4 660.2 490.0 654.1 636.2 664.4 651.3 632.8 666.2 674.3 660.0 662.1 490.1 657.1 638.2 666.4 651.3 632.8 668.1 676.8 662.4 490.1 660.1 643.2 666.2 634.6 668.4 653.4 668.4 662.1 491.1 661.2 641.3 670.4 653.4 653.6 670.2 667.8 670.2 670.2 670.2 493.4 661.2 641.3 670.4 653.2 641.8 679.5 662.9 670.2 670.2 670.0 495.6 662.2 641.3 677.5 662.1 643.2 670.2 673.0 670.0 495.6 660.2 641.8 677.6 648.2 670.2 673.0 673.0 673.0 673.0 673.0 673.0 670.0 649.8 682.1 <td></td>												
654.1 636.5 664.4 651.3 632.8 666.0 674.3 663.0 662.1 491.1 657.7 638.2 666.0 652.9 634.6 668.1 678.4 662.9 679.4 667.7 669.2 492.2 660.1 640.6 668.4 652.9 634.6 669.9 679.4 667.7 667.8 493.4 661.2 641.3 670.4 653.4 639.2 672.3 682.0 667.8 493.4 661.8 641.3 670.4 639.2 672.3 682.0 667.8 493.4 661.8 641.7 672.8 664.1 674.8 674.3 674.9 677.9 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 679.6 689.7 679.7 689.7 679.7 689.7 679.7 689.7 679.7	28:30	652.9	635.9	663.0	649.0	630.7	664.5	672.0	660.4	660.2	490.6	518.3
657.7 638.2 666.0 652.9 634.6 668.1 676.8 665.4 664.2 492.2 660.1 640.6 668.4 655.4 636.8 669.9 679.4 667.7 665.4 493.4 661.2 641.3 670.4 655.4 636.8 669.9 679.4 667.7 669.8 493.4 493.4 493.4 661.8 641.7 672.8 659.3 641.8 679.5 679.0 679.2 679.0 679.8 679.0 679.6 679.6 679.8 679.0 679.6 679.7 679.6 679.7 679.7 679.7 679.7 679.7 679.7 679.7 679.7 679.7	28:45	654.1	636.5	664.4	651.3	632.8	666.2	674.3	663.0	662.1	491.1	518.9
660.1 640.6 668.4 655.4 635.8 650.9 670.4 667.7 665.4 493.4 661.2 641.3 670.4 657.4 639.2 672.3 682.0 670.2 667.8 493.4 661.8 641.3 670.4 657.4 639.2 671.3 682.0 670.2 670.2 667.8 690.2 670.2 670.0 495.6 495.1 666.2 644.0 677.5 664.1 644.3 671.3 680.2 675.9 675.9 675.9 495.9 670.0 649.8 677.6 644.3 671.3 680.0 675.9 675.9 675.9 675.9 675.9 675.9 675.9 675.9 675.9 675.9 675.9 675.0 680.3 675.0 680.3 675.9 680.3 675.9 680.3 680.3 680.3 680.3 680.4 680.3 680.4 680.4 680.4 680.4 680.8 680.3 680.4 680.8 680.3	29: 0	657.7	638.2	0.999	652.9	634.6	668.1	8.929	665.4	664.2	492.2	521.0
661.2 641.3 670.4 657.4 639.2 672.3 682.0 670.2 667.8 495.1 661.8 641.7 672.8 659.3 641.8 674.6 683.9 673.0 670.0 495.6 663.5 644.0 675.5 662.1 645.0 677.3 688.2 675.9 675.0 495.6 666.2 647.8 664.7 648.3 679.5 688.0 675.1 495.3 670.0 649.8 677.6 648.3 679.6 688.0 678.0 671.0 671.0 681.0 682.0 687.0	29:15	660.1	640.6	668.4	655.4	636.8	6.699	679.4	2.799	665.4	493.4	521.6
661.8 641.7 672.8 659.3 641.8 674.6 683.9 673.0 670.0 495.6 663.5 644.0 675.5 662.1 645.0 677.3 686.2 675.9 672.6 496.3 666.2 647.8 677.6 647.7 648.3 679.5 688.0 675.9 675.1 496.3 670.0 649.8 677.6 644.3 671.0 681.0 675.0 675.1 497.3 670.0 649.8 677.1 651.0 681.0 681.0 681.0 681.0 681.0 681.0 682.0 682.0 681.0 682.0 682.0 682.0 681.0 682.0	29:30	661.2	641.3	670.4	657.4	639.2	672.3	682.0	670.2	8.799	495.1	522.7
663.5 644.0 675.5 662.1 645.0 677.3 686.2 675.9 675.9 675.9 675.9 675.9 675.9 675.9 675.0 496.3 666.2 647.8 677.6 664.7 648.3 679.5 688.0 675.9 675.1 497.3 670.0 649.8 680.5 667.7 651.0 681.6 690.1 681.5 677.6 498.8 677.6 498.8 677.6 689.0 687.1 687.9 687.1 687.9 687.1 687.9 </td <td>29:45</td> <td>8.199</td> <td>641.7</td> <td>672.8</td> <td>659.3</td> <td>641.8</td> <td>674.6</td> <td>683.9</td> <td>673.0</td> <td>0.079</td> <td>495.6</td> <td>523.5</td>	29:45	8.199	641.7	672.8	659.3	641.8	674.6	683.9	673.0	0.079	495.6	523.5
666.2 647.8 664.7 648.3 679.5 688.0 678.8 675.1 497.3 670.0 649.8 680.5 667.7 651.0 681.6 690.1 681.5 677.6 498.8 673.0 652.5 682.7 671.1 655.2 683.9 692.6 687.0 681.1 500.5 677.8 656.7 686.9 676.8 661.9 688.4 698.0 687.1 687.0 687.1 687.2 687.1 698.0 687.1 688.4 698.0 687.1 688.4 698.0 699.1 688.8 502.9 682.6 661.0 688.4 690.8 690.8 690.8 703.4 683.7 680.8 690.8 703.4 687.8 690.8 690.8 700.9 697.9 699.4 708.1 700.9 700.9 700.1 509.1 690.3 660.7 660.7 690.4 702.1 700.9 700.1 509.1 690.3 660.9	30: 0	663.5	644.0	675.5	662.1	645.0	677.3	686.2	675.9	672.6	496.3	525.0
670.0 649.8 680.5 667.7 651.0 681.5 690.1 681.5 677.6 498.8 673.0 652.5 682.7 671.1 655.2 683.9 692.6 687.0 681.1 500.5 676.2 653.8 685.1 674.4 658.6 686.1 695.0 687.4 683.7 502.1 677.8 656.7 686.9 676.8 661.9 688.4 690.8 690.1 683.7 502.1 680.7 658.4 689.2 679.4 664.8 690.8 700.8 692.5 688.8 503.8 682.6 661.0 690.8 671.9 690.5 706.0 697.8 690.5 706.0 697.8 690.7 681.9 660.7 687.6 671.9 699.4 708.1 705.0 702.9 700.1 512.0 690.3 660.3 667.5 689.6 675.3 706.1 707.0 707.9 707.4 513.6 691.9 <td>30:15</td> <td>666.2</td> <td>647.8</td> <td>9.779</td> <td>664.7</td> <td>648.3</td> <td>679.5</td> <td>0.889</td> <td>8.879</td> <td>675.1</td> <td>497.3</td> <td>527.8</td>	30:15	666.2	647.8	9.779	664.7	648.3	679.5	0.889	8.879	675.1	497.3	527.8
673.0 652.5 682.7 671.1 655.2 683.9 692.6 685.0 681.1 500.5 670.2 653.8 685.1 674.4 658.6 686.1 695.0 687.4 683.7 502.1 677.8 656.7 686.9 676.8 661.9 688.4 698.0 690.1 686.6 502.9 680.7 658.4 689.2 679.4 664.8 690.8 690.8 690.8 690.9 690.8 690.9 690.8 690.9 690.8 690.9 690.8 690.9	30:30	0.079	649.8	680.5	1.799	651.0	681.6	690.1	681.5	9.779	498.8	527.9
676.2653.8685.1674.4658.6686.1695.0687.4683.7502.1677.8656.7686.9676.8661.9688.4698.0690.1686.6502.9680.7658.4689.2679.4664.8690.8700.8692.5688.8503.8682.6661.0690.8681.8667.5693.5703.4695.1691.0504.4684.9663.4693.3683.8667.5696.5706.0697.8693.7509.1690.3667.5687.4673.8702.1710.5702.9700.1512.0691.9668.7699.6678.4675.3703.9712.1705.0702.4513.6692.9670.9700.2689.6676.7706.1714.4707.0704.9513.6	30:45	673.0	652.5	682.7	671.1	655.2	683.9	692.6	685.0	681.1	500.5	528.8
677.8656.7686.9676.8661.9688.4698.0690.1686.6502.9680.7658.4689.2679.4664.8690.8700.8692.5688.8503.8682.6661.0690.8681.8667.5693.5703.4695.1691.0504.4684.9663.4693.3683.8669.7696.5706.0697.8693.7509.1690.3667.5697.9687.4673.8702.1710.5702.9700.1512.0691.9668.7699.6676.7706.1714.4707.0704.9513.6	31: 0	676.2	653.8	685.1	674.4	658.6	686.1	695.0	687.4	683.7	502.1	529.8
680.7658.4689.2679.4664.8690.8700.8692.5688.8503.8682.6661.0690.8681.8667.5693.5703.4695.1691.0504.4684.9663.4693.3683.8669.7696.5706.0697.8693.7509.1687.2666.0695.6685.6671.9699.4708.2700.4697.2509.1690.3667.5697.9688.4675.3703.9712.1705.0702.4513.6691.9668.7689.6676.7706.1714.4707.0704.9515.4	31:15	8.779	656.7	6.989	8.929	6.199	688.4	0.869	690.1	9.989	502.9	531.2
682.6 661.0 690.8 681.8 667.5 693.5 703.4 695.1 691.0 504.4 684.9 663.4 693.3 683.8 669.7 696.5 706.0 697.8 693.7 507.2 687.2 666.0 695.6 685.6 671.9 699.4 708.2 700.4 697.2 509.1 690.3 667.5 697.9 687.4 673.8 702.1 710.5 702.9 700.1 512.0 691.9 668.7 699.6 688.4 675.3 703.9 712.1 705.0 702.4 513.6 692.9 670.9 700.2 689.6 676.7 706.1 714.4 707.0 704.9 515.4	31:30	680.7	658.4	689.2	679.4	8.499	8.069	700.8	692.5	8.889	503.8	531.5
684.9 663.4 693.3 683.8 669.7 696.5 706.0 697.8 693.7 507.2 687.2 666.0 695.6 685.6 671.9 699.4 708.2 700.4 697.2 509.1 690.3 667.5 697.9 687.4 673.8 702.1 710.5 702.9 700.1 512.0 691.9 668.7 699.6 688.4 675.3 703.9 712.1 705.0 702.4 513.6 692.9 670.9 700.2 689.6 676.7 706.1 714.4 707.0 704.9 515.4	31:45	682.6	0.199	8.069	8.189	667.5	693.5	703.4	695.1	691.0	504.4	532.5
687.2 666.0 695.6 685.6 671.9 699.4 708.2 700.4 697.2 509.1 690.3 667.5 697.9 687.4 673.8 702.1 710.5 702.9 700.1 512.0 691.9 668.7 699.6 688.4 675.3 703.9 712.1 705.0 702.4 513.6 692.9 670.9 700.2 689.6 676.7 706.1 714.4 707.0 704.9 515.4	32: 0	684.9	663.4	693.3	683.8	2.699	696.5	706.0	8.769	693.7	507.2	533.2
690.3 667.5 697.9 687.4 673.8 702.1 710.5 702.9 700.1 512.0 691.9 668.7 699.6 688.4 675.3 703.9 712.1 705.0 702.4 513.6 692.9 670.9 700.2 689.6 676.7 706.1 714.4 707.0 704.9 515.4	32:15	687.2	0.999	695.6	9.589	671.9	699.4	708.2	700.4	697.2	509.1	534.4
691.9 668.7 699.6 688.4 675.3 703.9 712.1 705.0 702.4 513.6 692.9 670.9 700.2 689.6 676.7 706.1 714.4 707.0 704.9 515.4	32:30	690.3	667.5	6.769	687.4	673.8	702.1	710.5	702.9	700.1	512.0	536.3
692.9 670.9 700.2 689.6 676.7 706.1 714.4 707.0 704.9 515.4	32:45	691.9	668.7	9.669	688.4	675.3	703.9	712.1	705.0	702.4	513.6	538.2
	33: 0	692.9	6.029	700.2	9.689	676.7	706.1	714.4	707.0	704.9	515.4	539.7

DATE: 26 MAY 1993 FILE: 146CG-2.DAT	•								SWR TEST 1	II PROJEC IYPE: IMC	SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13)
MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
33:15	694.3	674.2	701.1	6.069	678.3	708.0	716.0	708.8	6.907	516.8	542.3
33:30	695.2	675.7	702.0	691.9	679.5	709.3	717.5	710.3	708.4	517.9	543.3
33:45	696.7	676.5	703.2	692.9	680.3	710.7	719.0	711.6	7.607	519.3	545.8
34: 0	8.769	677.4	704.3	694.0	681.4	711.7	720.3	713.3	711.8	520.7	547.3
34:15	0.669	678.4	704.6	695.1	682.2	712.6	721.4	714.5	713.7	521.9	548.9
34:30	700.3	678.4	704.7	696.4	683.1	713.4	722.8	715.8	714.8	523.9	549.4
34:45	701.3	1.619	705.1	9.769	684.0	714.0	724.4	717.3	715.9	525.3	550.5
35: 0	702.4	8.089	705.7	0.669	685.2	714.8	725.5	718.6	717.2	526.3	552.1
35:15	703.3	681.8	705.9	700.2	686.2	715.5	726.7	719.5	719.0	527.4	553.9
35:30	704.2	682.7	0.907	701.0	9.989	715.9	728.1	720.1	720.0	528.6	555.0
35:45	705.4	686.3	706.0	701.6	687.4	716.1	729.0	720.9	720.8	530.3	556.1
36: 0	705.9	690.4	706.4	702.2	0.889	716.3	730.2	721.6	722.1	530.9	558.2
36:15	706.6	697.5	706.4	702.8	690.7	716.5	730.8	721.9	722.9	531.4	560.0
36:30	7.707	704.5	706.1	703.6	694.0	716.5	731.7	722.2	723.8	532.0	561.5
36:45	708.2	708.3	7.907	704.4	8.969	716.8	732.3	722.1	724.9	533.2	562.6
37: 0	716.6	714.0	8.902	704.6	697.1	716.9	732.3	721.9	725.6	536.8	576.6
37:15	708.3	724.1	9.902	705.1	2.969	717.2	731.8	721.3	725.3	533.7	576.4
37:30	706.6	727.2	704.2	703.4	0.0	714.8	729.1	720.0	723.6	536.3	572.9
37:45	704.9	726.5	701.6	700.2	0.0	711.0	724.1	714.7	718.7	535.9	573.8

TEST NO. 3

DATE: 27 MAY 1993 FILE: 147CG-3.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
0: 0	54.8	53.2	51.9	51.9	50.6	52.5	-19.9
0:15	115.1	125.0	101.4	98.1	104.1	108.7	104.6
0:30	322.4	342.4	305.5	312.7	249.6	306.5	-84.7
0:45	404.5	442.4	392.5	387.1	348.1	394.9	-29.9
1: 0	412.0	434.8	411.8	389.4	378.7	405.3	-2.5
1:15	393.6	406.5	403.1	376.4	371.8	390.3	10.0
1:30	392.9	403.1	405.2	376.7	367.6	389.1	10.0
1:45	417.2	444.9	436.3	410.7	405.3	422.9	12.5
2: 0	460.5	487.7	481.9	464.1	451.1	469.1	14.9
2:15	493.5	506.6	515.5	475.6	481.7	494.6	10.0
2:30	498.3	513.3	515.1	472.5	479.9	495.8	5.0
2:45	494.1	511.6	502.7	464.7	471.6	488.9	7.5
3: 0	488.6	512.7	503.4	464.0	479.8	489.7	7.5
3:15	502.3	516.4	511.2	472.0	482.2	496.8	10.0
3:30	509.4	540.5	530.9	495.3	496.5	514.5	12.5
3:45	534.7	563.9	553.4	514.7	526.8	538.7	12.5
4: 0	547.9	575.3	573.0	530.5	539.2	553.2	12.5
4:15	553.5	589.3	579.8	538.2	550.5	562.3	12.5
4:30	573.5	599.2	585.2	540.9	559.0	571.6	12.5
4:45	569.8	605.8	596.2	556.7	570.9	579.9	12.5
5: 0	573.9	610.1	598.0	560.5	582.2	584.9	10.0
5:15	586.4	618.3	605.4	574.5	584.7	593.9	12.5
5:30	585.1	618.5	605.0	575.7	599.0	596.7	12.5
5:45	602.9	625.7	615.3	580.6	595.2	604.0	12.5
6: 0	605.9	631.7	622.7	584.0	595.1	607.9	10.0
6:15	599.6	634.3	625.4	584.9	596.9	608.2	12.5
6:30	597.5	641.6	632.4	591.5	607.7	614.1	10.0

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MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
6:45	614.8	650.1	643.4	601.3	622.0	626.3	12.5
7: 0	626.9	654.2	649.4	614.3	638.2	636.6	12.5
7:15	630.3	661.0	656.1	612.3	648.2	641.6	10.0
7:30	638.3	667.4	660.7	619.5	649.5	647.1	12.5
7:45	639.3	671.6	661.3	626.9	657.6	651.3	12.5
8: 0	654.0	677.5	669.2	628.7	668.2	659.5	10.0
8:15	651.2	681.6	673.2	632.9	670.1	661.8	12.5
8:30	655.0	683.8	671.9	641.6	671.3	664.7	14.9
8:45	669.0	688.1	677.7	640.8	678.5	670.8	12.5
9: 0	658.3	691.6	681.4	640.6	681.4	670.7	14.9
9:15	659.6	691.7	681.1	643.4	669.5	669.1	12.5
9:30	665.5	694.7	687.9	646.0	674.6	673.7	10.0
9:45	660.5	700.4	690.3	653.0	685.0	677.8	10.0
10: 0	671.7	704.0	697.0	655.5	686.2	682.9	7.5
10:15	679.0	707.7	700.2	664.0	695.4	689.2	10.0
10:30	687.3	713.7	704.0	663.3	699.5	693.5	10.0
10:45	687.6	715.1	709.0	671.3	697.2	696.0	10.0
11: 0	694.0	716.8	709.2	671.3	707.2	699.7	7.5
11:15	687.7	720.5	709.3	679.1	707.5	700.8	10.0
11:30	689.5	724.9	714.5	678.4	717.8	705.0	7.5
11:45	698.5	730.1	720.4	682.9	710.4	708.4	10.0
12: 0	697.3	733.0	722.6	686.7	723.0	712.5	7.5
12:15	706.4	733.8	726.3	686.2	730.5	716.6	10.0
12:30	713.4	739.8	731.0	691.8	724.9	720.2	7.5
12:45	714.8	738.1	730.2	698.5	730.0	722.3	7.5
13: 0	714.1	743.7	735.0	699.8	734.4	725.4	7.5
13:15	722.7	743.9	734.2	705.3	738.9	729.0	7.5

DATE: 27 MAY 1993 FILE: 147CG-3.DAT

MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
13:30	714.1	745.0	734.0	710.1	739.1	728.5	10.0
13:45	717.3	748.5	742.1	715.2	737.6	732.2	10.0
14: 0	719.2	751.4	745.9	711.8	745.3	734.7	10.0
14:15	717.6	749.4	747.0	717.8	744.1	735.2	10.0
14:30	719.7	754.0	748.1	718.8	751.5	738.4	10.0
14:45	719.4	752.7	748.9	722.2	754.9	739.6	10.0
15: 0	725.1	755.1	750.8	720.9	751.7	740.7	10.0
15:15	734.7	758.7	754.0	728.3	758.2	746.8	10.0
15:30	728.1	763.6	752.1	730.6	761.3	747.2	10.0
15:45	736.9	766.8	758.4	729.7	762.6	750.9	10.0
16: 0	738.0	766.9	761.9	737.0	762.9	753.4	10.0
16:15	744.0	770.8	767.1	741.0	763.6	757.3	10.0
16:30	736.6	770.0	769.5	741.4	768.9	757.3	12.5
16:45	749.1	775.7	771.3	736.5	767.8	760.1	10.0
17: 0	743.8	777.0	773.9	748.8	779.3	764.6	10.0
17:15	743.7	780.8	777.0	747.7	781.1	766.0	10.0
17:30	749.0	780.7	775.6	751.7	782.6	767.9	10.0
17:45	750.4	779.5	776.6	751.5	784.3	768.5	10.0
18: 0	747.1	781.9	777.8	752.8	784.2	768.8	10.0
18:15	745.3	788.5	782.3	754.7	785.2	771.2	10.0
18:30	754.6	788.1	780.0	771.9	790.5	777.0	12.5
18:45	768.8	791.2	784.9	764.2	788.9	779.6	10.0
19: 0	767.6	788.3	785.8	766.5	792.2	780.1	10.0
19:15	759.6	793.8	790.3	763.5	795.8	780.6	10.0
19:30	766.8	789.5	786.9	772.9	798.2	782.9	10.0
19:45	759.1	795.0	787.6	768.0	787.3	779.4	10.0
20: 0	760.9	793.2	792.7	762.6	799.5	781.8	10.0

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MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
		7					
20:15	758.0	797.1	793.1	771.6	802.9	784.5	10.0
20:30	770.3	797.6	797.1	772.6	802.0	787.9	12.5
20:45	765.7	801.4	801.2	778.4	803.0	790.0	10.0
21: 0	783.8	805.9	803.9	801.7	798.1	798.7	12.5
21:15	777.7	811.8	805.7	790.1	809.6	799.0	12.5
21:30	790.1	812.7	806.5	793.9	811.5	803.0	12.5
21:45	780.5	814.4	809.1	796.6	812.4	802.6	12.5
22: 0	786.5	816.4	806.8	797.3	809.9	803.4	10.0
22:15	791.8	820.7	808.9	811.4	801.2	806.8	12.5
22:30	786.7	817.0	815.4	802.3	811.9	806.6	12.5
22:45	779.8	819.3	810.5	796.0	810.4	803.2	10.0
23: 0	781.3	821.7	817.2	810.1	816.5	809.4	10.0
23:15	790.2	822.4	814.4	815.1	811.7	810.8	10.0
23:30	794.6	825.6	822.8	817.7	810.8	814.3	10.0
23:45	790.4	829.2	821.2	813.3	809.2	812.7	10.0
24: 0	785.9	827.3	821.6	822.4	811.3	813.7	10.0
24:15	791.4	832.0	821.9	823.1	814.7	816.6	10.0
24:30	801.0	828.8	827.7	827.9	816.5	820.4	10.0
24:45	798.6	833.6	824.4	829.9	815.6	820.4	10.0
25: 0	796.0	837.9	824.1	827.9	817.6	820.7	12.5
25:15	806.8	833.6	828.2	838.5	820.7	825.6	12.5
25:30	802.2	838.9	827.5	823.4	818.0	822.0	10.0
25:45	796.4	841.8	833.2	836.4	817.9	825.1	10.0
26: 0	798.7	838.1	836.5	838.6	823.3	827.0	10.0
26:15	799.7	842.9	831.8	836.6	823.8	827.0	10.0
26:30	803.8	841.2	836.5	828.8	822.4	826.5	10.0
26:45	805.9	844.3	840.6	816.9	826.5	826.8	10.0

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MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
27: 0	806.7	841.4	836.8	826.9	828.0	827.9	10.0
27:15	810.2	848.2	838.5	840.6	826.4	832.8	12.5
27:30	811.9	849.8	843.3	848.9	829.7	836.7	12.5
27:45	805.1	854.5	843.0	849.8	831.3	836.7	12.5
28: 0	815.6	854.0	844.7	853.6	834.7	840.5	10.0
28:15	814.8	854.3	842.0	838.3	832.4	836.4	10.0
28:30	815.4	853.8	846.9	833.7	835.5	837.1	10.0
28:45	817.7	857.4	843.6	852.2	838.6	841.9	12.5
29: 0	824.4	858.9	845.9	851.8	835.1	843.2	12.5
29:15	815.4	857.9	848.5	839.4	840.5	840.3	12.5
29:30	818.6	859.0	848.6	842.5	842.1	842.2	12.5
29:45	823.0	860.2	852.3	、856.8	837.1	845.9	10.0
30: 0	830.2	862.6	856.0	857.3	836.1	848.4	12.5
30:15	827.4	865.3	854.5	857.7	843.0	849.6	10.0
30:30	824.8	866.4	855.7	862.0	844.4	850.7	12.5
30:45	831.7	866.3	858.3	860.2	842.8	851.9	12.5
31: 0	826.6	868.0	861.1	866.0	849.7	854.3	12.5
31:15	821.9	866.1	861.3	862.7	846.1	851.6	10.0
31:30	826.4	869.7	858.8	861.8	846.8	852.7	10.0
31:45	831.8	873.4	861.2	865.8	846.7	855.8	10.0
32: 0	832.0	876.7	859.7	856.6	849.0	854.8	10.0
32:15	834.2	876.8	864.9	868.3	852.8	859.4	10.0
32:30	831.1	875.7	874.1	862.3	852.1	859.1	10.0
32:45	840.9	872.4	867.1	865.9	862.8	861.8	12.5
33: 0	835.0	881.8	876.2	865.3	854.8	862.6	10.0
33:15	838.4	883.6	868.5	866.4	856.9	862.8	12.5
33:30	840.4	885.1	871.3	863.0	860.6	864.1	10.0

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MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
33:45	840.9	882.9	874.2	865.9	861.5	865.1	12.5
34: 0	852.4	883.5	877.4	882.3	856.9	870.5	10.0
34:15	842.3	0.888	878.2	860.5	856.0	865.0	10.0
34:30	846.6	889.9	881.6	878.4	863.6	872.0	12.5
34:45	849.5	894.1	885.9	879.8	864.4	874.7	10.0
35: 0	848.7	893.6	881.2	871.9	867.2	872.5	10.0
35:15	851.7	893.7	887.4	879.6	867.0	875.9	10.0
35:30	851.4	894.2	882.5	883.0	866.2	875.5	10.0
35:45	847.8	893.9	884.0	883.6	868.4	875.6	10.0
36: 0	856.3	898.4	888.0	892.2	867.6	880.5	10.0
36:15	858.0	895.7	889.7	886.6	867.6	879.5	10.0
36:30	855.8	900.5	888.1	868.0	869.2	876.3	10.0
36:45	853.5	900.5	886.6	884.2	874.1	879.8	10.0
37: 0	856.5	901.8	892.5	876.8	871.4	879.8	12.5
37:15	855.1	902.1	894.5	895.8	875.8	884.7	10.0
37:30	863.3	904.1	896.6	886.9	872.8	884.7	10.0
37:45	865.0	905.6	891.3	894.7	871.7	885.7	10.0
38: 0	855.2	904.4	896.4	891.8	873.4	884.2	10.0
38:15	861.9	902.9	895.7	887.0	874.7	884.4	7.5
38:30	868.0	901.4	896.2	883.1	874.2	884.5	10.0
38:45	861.8	904.4	895.3	889.4	871.4	884.5	10.0
39: 0	861.2	902.7	893.9	891.6	877.0	885.3	10.0
39:15	865.4	905.5	893.9	902.3	877.2	888.9	10.0
39:30	863.7	901.6	899.9	893.3	874.0	886.5	10.0
39:45	860.7	906.9	899.2	897.5	877.0	888.3	10.0
40: 0	867.5	909.8	896.2	891.4	877.2	888.4	10.0
40:15	863.5	908.6	903.3	892.4	877.6	889.1	12.5

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MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf
40:30	861.0	908.7	896.2	886.7	879.2	886.4	10.0
40:45	869.2	906.7	902.9	896.2	878.7	890.7	10.0
41: 0	863.6	913.7	898.8	883.9	879.8	887.9	10.0
41:15	870.4	915.6	903.4	889.3	883.0	892.3	10.0
41:30	871.1	916.4	899.8	895.2	886.7	893.8	10.0
41:45	873.2	919.1	901.6	895.9	885.1	895.0	10.0
42: 0	871.5	920.6	908.0	902.3	889.4	898.4	10.0
42:15	881.9	922.6	912.9	896.7	889.8	900.8	10.0
42:30	877.9	921.7	905.0	892.8	890.5	897.6	12.5
42:45	876.4	924.6	918.1	896.3	891.8	901.4	10.0
43: 0	880.4	920.7	913.0	905.0	892.3	902.3	10.0
43:15	884.4	922.6	909.3	918.5	892.3	905.4	10.0
43:30	879.2	926.4	911.0	911.7	892.7	904.2	10.0
43:45	879.0	926.9	915.7	909.2	896.0	905.4	10.0
44: 0	885.3	926.4	914.6	908.0	893.7	905.6	10.0
44:15	883.5	924.3	918.5	917.5	897.4	908.2	10.0
44:30	887.9	927.6	916.4	919.9	898.6	910.1	10.0
44:45	884.2	926.6	910.0	910.2	898.3	905.9	10.0
45: 0	887.0	929.1	914.7	926.9	898.5	911.2	10.0
45:15	882.3	928.9	922.0	922.7	897.7	910.7	10.0
45:30	882.7	929.4	923.7	918.4	902.8	911.4	12.5
45:45	884.7	929.5	921.0	917.9	899.9	910.6	12.5
46: 0	888.3	929.8	924.0	926.3	896.5	913.0	7.5
46:15	882.3	930.9	928.5	929.0	894.9	913.1	7.5
46:30	885.3	931.2	926.0	929.1	898.4	914.0	7.5
46:45	886.8	931.1	920.0	925.3	892.9	911.2	7.5
47: 0	882.9	930.9	923.7	923.0	896.2	911.3	5.0

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MIN:SEC	Tf 1	Tf 2	Tf 3	Tf 4	Tf 5	AVG	Pf	
47:15	884.8	930.4	927.3	923.8	895.5	912.3	7.5	
47:30	883.5	930.7	920.6	919.7	897.8	910.4	7.5	
47:45	887.1	930.8	928.7	913.3	900.8	912.1	5.0	
48: 0	886.4	935.8	931.0	914.1	894.5	912.4	7.5	
48:15	890.5	938.3	926.0	932.6	898.6	917.2	5.0	
48:30	875.4	892.2	912.1	912.0	898.7	898.1	-2.5	
48:45	844.0	851.7	838.8	835.5	822.2	838.4	-2.5	

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MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
0: 0	0.0	0.0	0.0	0.0	0.0
0:15	0.1	0.2	0.1	0.1	0.2
0:30	0.6	0.6	0.5	0.4	0.4
0:45	0.5	0.5	0.4	0.3	0.4
1: 0	0.5	0.5	0.4	0.3	0.4
1:15	0.5	0.5	0.4	0.2	0.4
1:30	0.6	0.6	0.4	0.3	0.5
1:45	0.8	0.9	0.7	0.5	0.8
2: 0	1.1	1.4	1.0	0.7	1.2
2:15	1.4	1.7	1.3	0.9	1.5
2:30	1.5	1.7	1.3	0.9	1.5
2:45	1.6	1.9	1.4	0.9	1.6
3: 0	1.8	2.0	1.6	1.0	1.8
3:15	2.0	2.3	1.8	1.1	2.0
3:30	2.4	2.8	2.2	1.4	2.5
3:45	2.8	3.2	2.5	1.6	2.9
4: 0	3.2	3.7	2.9	1.9	3.3
4:15	3.7	4.2	3.2	2.1	3.7
4:30	4.1	4.6	3.6	2.4	4.1
4:45	4.5	5.1	3.9	2.6	4.5
5: 0	4.9	5.5	4.3	2.8	4.9
5:15	5.4	6.0	4.7	3.1	5.3
5:30	5.8	6.4	5.1	3.3	5.7
5:45	6.2	6.9	5.4	3.6	6.2
6: 0	6.7	7.4	5.8	3.9	6.6
6:15	7.2	7.9	6.3	4.2	7.1
6:30	7.6	8.4	6.6	4.4	7.5

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MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
6:45	8.2	9.1	7.2	4.9	8.2
7: 0	8.7	9.7	7.7	5.3	8.8
7:15	9.3	10.3	8.2	5.6	9.3
7:30	9.8	10.8	8.6	6.0	9.8
7:45	10.3	11.4	9.1	6.3	10.3
8: 0	10.8	11.9	9.5	6.6	10.8
8:15	11.3	12.4	9.9	7.0	11.2
8:30	11.8	12.9	10.4	7.3	11.7
8:45	12.3	13.4	10.8	7.6	12.2
9: 0	12.7	13.9	11.2	7.9	12.5
9:15	13.2	14.2	11.5	8.1	12.9
9:30	13.6	14.7	11.9	8.4	13.3
9:45	13.9	15.1	12.2	8.7	13.7
10: 0	14.4	15.5	12.6	9.0	14.1
10:15	14.9	16.1	13.1	9.4	14.6
10:30	15.3	16.5	13.4	9.7	15.0
10:45	15.7	16.9	13.8	10.0	15.4
11: 0	16.1	17.4	14.2	10.3	15.9
11:15	16.5	17.8	14.5	10.6	16.2
11:30	16.9	18.1	14.9	10.9	16.6
11:45	17.4	18.6	15.3	11.3	17.1
12: 0	17.8	19.0	15.7	11.6	17.5
12:15	18.1	19.4	16.0	11.8	17.9
12:30	18.5	19.8	16.4	12.1	18.2
12:45	18.8	20.2	16.7	12.4	18.6
13: 0	19.2	20.5	17.0	12.7	19.0
13:15	19.4	20.8	17.3	12.9	19.3

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MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
13:30	19.8	21.1	17.6	13.2	19.6
13:45	20.1	21.5	17.9	13.5	19.9
14: 0	20.4	21.8	18.2	13.7	20.2
14:15	20.7	22.1	18.5	13.9	20.5
14:30	20.9	22.3	18.8	14.1	20.8
14:45	21.2	22.6	19.0	14.4	21.1
15: 0	21.4	22.9	19.3	14.6	21.4
15:15	21.7	23.1	19.6	14.8	21.7
15:30	22.0	23.5	19.9	15.1	22.1
15:45	22.2	23.8	20.1	15.3	22.4
16: 0	22.5	24.0	20.4	15.5	22.6
16:15	22.7	24.3	20.6	15.8	23.0
16:30	23.0	24.6	20.9	16.0	23.2
16:45	23.2	25.0	21.2	16.2	23.6
17: 0	23.5	25.3	21.5	16.5	23.9
17:15	23.8	25.5	21.8	16.7	24.2
17:30	24.0	25.8	22.0	16.9	24.5
17:45	24.3	26.1	22.3	17.1	24.8
18: 0	24.6	26.4	22.6	17.4	25.1
18:15	24.9	26.7	22.8	17.7	25.5
18:30	25.2	26.9	23.1	17.9	25.8
18:45	25.4	27.2	23.3	18.1	26.0
19: 0	25.6	27.4	23.5	18.3	26.2
19:15	25.8	27.7	23.7	18.4	26.4
19:30	25.9	27.9	23.9	18.6	26.7
19:45	26.2	28.1	24.1	18.8	27.0
20: 0	26.4	28.3	24.3	19.0	27.2

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Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
26.5	28.4	24.5	19.1	27.4
26.8	28.9	24.8	19.4	27.7
27.0	29.1	25.1	19.6	28.0
27.6	29.7	25.5	20.1	28.7
27.8	30.0	25.8	20.4	28.9
28.3	30.3	26.1	20.6	29.3
28.3	30.5	26.4	20.8	29.5
28.7	30.9	26.6	21.0	29.9
28.9	31.1	26.8	21.3	30.2
29.2	31.3	27.0	21.4	30.2
29.3	31.5	27.2	21.6	30.5
29.6	31.7	27.4	21.8	30.8
30.0	32.1	27.8	22.1	31.3
30.3	32.5	28.1	22.4	31.6
30.6	32.8	28.4	22.6	31.9
30.7	33.0	28.6	22.8	32.1
31.1	33.3	28.8	23.0	32.5
31.3	33.6	29.1	23.3	32.7
31.5	33.8	29.3	23.4	33.0
31.6	34.1	29.5	23.6	33.2
31.8	34.2	29.6	23.8	33.5
32.1	34.5	29.9	23.9	33.7
32.3	34.6	30.0	24.1	33.8
32.4	34.8	30.2	24.2	33.9
32.5	34.9	30.4	24.4	34.2
32.8	35.3	30.6	24.6	34.4
33.0	35.5	30.8	24.8	34.7
	26.5 26.8 27.0 27.6 27.8 28.3 28.3 28.7 28.9 29.2 29.3 29.6 30.0 30.3 30.6 30.7 31.1 31.3 31.5 31.6 31.8 32.1 32.3 32.4 32.5 32.8	26.5 28.4 26.8 28.9 27.0 29.1 27.6 29.7 27.8 30.0 28.3 30.3 28.3 30.5 28.7 30.9 28.9 31.1 29.2 31.3 29.3 31.5 29.6 31.7 30.0 32.1 30.3 32.5 30.6 32.8 30.7 33.0 31.1 33.3 31.3 33.6 31.5 33.8 31.6 34.1 31.8 34.2 32.1 34.5 32.3 34.6 32.4 34.8 32.5 34.9 32.8 35.3	26.5 28.4 24.5 26.8 28.9 24.8 27.0 29.1 25.1 27.6 29.7 25.5 27.8 30.0 25.8 28.3 30.3 26.1 28.3 30.5 26.4 28.7 30.9 26.6 28.9 31.1 26.8 29.2 31.3 27.0 29.3 31.5 27.2 29.6 31.7 27.4 30.0 32.1 27.8 30.3 32.5 28.1 30.6 32.8 28.4 30.7 33.0 28.6 31.1 33.3 28.8 31.3 33.6 29.1 31.5 33.8 29.3 31.6 34.1 29.5 31.8 34.2 29.6 32.1 34.5 29.9 32.3 34.6 30.0 32.4 34.8 30.2 32.5 34.9 30.4 32.8 35.3	26.5 28.4 24.5 19.1 26.8 28.9 24.8 19.4 27.0 29.1 25.1 19.6 27.6 29.7 25.5 20.1 27.8 30.0 25.8 20.4 28.3 30.3 26.1 20.6 28.3 30.5 26.4 20.8 28.7 30.9 26.6 21.0 28.9 31.1 26.8 21.3 29.2 31.3 27.0 21.4 29.3 31.5 27.2 21.6 29.6 31.7 27.4 21.8 30.0 32.1 27.8 22.1 30.3 32.5 28.1 22.4 30.6 32.8 28.4 22.6 30.7 33.0 28.6 22.8 31.1 33.3 28.8 23.0 31.3 33.6 29.1 23.3 31.5 33.8 29.3 23.4 31.6 34.1 29.5 23.6 31.8 34.2

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MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5	
27: 0	33.2	35.7	31.0	25.0	34.8	
27:15	33.5	36.3	31.4	25.3	35.3	
27:30	33.8	36.4	31.6	25.5	35.6	
27:45	33.9	36.5	31.8	25.7	35.7	
28: 0	34.2	36.9	32.0	25.9	36.0	
28:15	34.5	37.1	32.2	26.0	36.1	
28:30	34.7	37.3	32.4	26.2	36.4	
28:45	34.7	37.5	32.6	26.4	36.5	
29: 0	35.0	37.7	32.8	26.6	36.8	
29:15	35.3	38.1	33.1	26.8	37.2	
29:30	35.5	38.3	33.3	26.9	37.2	
29:45	35.5	38.4	33.4	27.1	37.5	
30: 0	35.9	39.0	33.7	27.4	37.9	
30:15	36.1	39.0	33.9	27.6	38.0	
30:30	36.3	39.3	34.1	27.8	38.3	
30:45	36.4	39.5	34.3	28.0	38.5	
31: 0	36.6	39.7	34.6	28.1	38.7	
31:15	36.9	39.9	34.6	28.3	38.8	
31:30	36.9	40.1	34.8	28.3	39.0	
31:45	37.2	40.3	35.1	28.6	39.2	
32: 0	37.1	40.8	35.4	29.0	39.6	
32:15	37.2	40.9	35.6	29.1	39.8	
32:30	37.5	41.2	35.9	29.3	40.1	
32:45	37.8	41.6	36.1	29.6	40.4	
33: 0	38.0	42.1	36.5	29.9	40.8	
33:15	38.3	42.3	36.7	30.2	41.1	
33:30	38.5	42.7	37.0	30.4	41.4	

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MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
33:45	38.5	42.8	37.1	30.5	41.5
34: 0	38.7	43.0	37.3	30.7	41.8
34:15	39.2	43.4	37.6	31.0	42.0
34:30	39.6	43.9	38.0	31.4	42.5
34:45	39.8	44.0	38.3	31.6	42.7
35: 0	40.2	44.5	38.5	31.8	42.9
35:15	40.3	44.6	38.7	32.0	43.2
35:30	40.6	45.0	39.0	32.2	43.5
35:45	40.7	45.2	39.2	32.4	43.7
36: 0	40.9	45.5	39.4	32.6	43.9
36:15	41.2	45.6	39.6	32.7	44.1
36:30	41.2	45.8	39.7	32.9	44.2
36:45	41.5	45.7	39.8	33.0	44.3
37: 0	41.8	46.1	40.1	33.2	44.6
37:15	41.8	46.4	40.1	33.3	44.7
37:30	42.1	46.5	40.3	33.4	44.9
37:45	42.1	46.5	40.4	33.5	44.9
38: 0	42.3	46.7	40.5	33.6	45.1
38:15	42.5	46.8	40.7	33.7	45.1
38:30	42.4	47.0	40.8	33.9	45.3
38:45	42.6	47.1	40.9	33.9	45.4
39: 0	42.7	47.1	41.0	34.1	45.6
39:15	42.8	47.3	41.1	34.1	45.7
39:30	42.9	47.3	41.2	34.2	45.7
39:45	43.1	47.5	41.4	34.4	46.0
40: 0	43.1	47.6	41.5	34.4	46.1
40:15	43.4	48.0	41.7	34.6	46.2

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MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
40:30	43.5	48.0	41.9	34.8	46.5
40:45	43.5	48.1	41.9	34.8	46.5
41: 0	44.0	48.5	42.3	35.2	46.8
41:15	44.2	48.7	42.5	35.4	47.1
41:30	44.6	49.1	42.9	35.7	47.5
41:45	45.2	49.8	43.3	36.2	48.0
42: 0	45.3	50.0	43.6	36.4	48.3
42:15	45.7	50.5	43.8	36.7	48.6
42:30	45.8	50.5	44.1	36.8	48.7
42:45	45.9	50.7	44.2	37.0	48.8
43: 0	46.1	50.8	44.4	37.1	49.2
43:15	46.1	51.0	44.5	37.3	49.4
43:30	46.3	51.3	44.7	37.5	49.4
43:45	46.6	51.4	44.9	37.6	49.7
44: 0	46.7	51.6	45.0	37.8	49.8
44:15	46.8	51.9	45.3	38.0	50.3
44:30	46.9	51.9	45.4	38.1	50.2
44:45	47.1	52.2	45.5	38.2	50.5
45: 0	47.0	52.1	45.7	38.3	50.6
45:15	47.4	52.2	45.8	38.4	50.7
45:30	47.6	52.4	45.9	38.6	50.9
45:45	47.7	52.6	46.0	38.6	51.0
46: 0	47.8	52.7	46.0	38.7	50.8
46:15	47.8	52.6	46.0	38.7	50.8
46:30	47.8	52.7	46.1	38.7	50.9
46:45	47.9	52.9	46.2	38.7	51.0
47: 0	48.0	52.7	46.3	38.8	50.9

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MIN:SEC	Rad 1	Rad 2	Rad 3	Rad 4	Rad 5
47:15	48.0	52.8	46.3	38.8	51.0
47:30	48.0	52.7	46.4	38.9	51.0
47:45	48.3	53.2	46.7	39.2	51.2
48: 0	48.7	53.5	47.0	39.5	51.4
48:15	48.5	53.6	47.3	39.6	51.3
48:30	47.5	56.2	48.1	39.8	48.8
48:45	45.7	56.8	45.2	36.4	41.7

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MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
0: 0	25.0	24.9	24.9	24.9	24.8
0:15	25.0	24.9	25.0	24.9	24.9
0:30	25.0	24.9	25.0	25.0	24.9
0:45	25.0	24.9	25.0	25.0	24.9
1: 0	25.0	24.9	25.0	25.0	24.9
1:15	25.0	24.9	25.0	25.0	24.9
1:30	25.0	24.9	25.0	25.0	24.9
1:45	25.0	24.9	25.0	25.0	24.9
2: 0	25.0	24.9	25.0	25.0	24.9
2:15	25.0	24.9	25.0	25.0	24.9
2:30	25.0	24.9	25.0	25.0	24.9
2:45	25.0	25.0	25.0	25.0	24.9
3: 0	25.0	24.9	25.0	25.0	24.9
3:15	25.0	25.0	25.0	25.0	24.9
3:30	25.1	25.0	25.0	25.0	24.9
3:45	25.1	25.0	25.0	25.0	24.9
4: 0	25.1	25.0	25.1	25.1	24.9
4:15	25.1	25.0	25.1	25.1	24.9
4:30	25.1	25.0	25.1	25.1	24.9
4:45	25.1	25.0	25.1	25.1	25.0
5: 0	25.1	25.0	25.1	25.1	25.0
5:15	25.2	25.1	25.2	25.1	25.0
5:30	25.2	25.1	25.2	25.2	25.0
5:45	25.2	25.1	25.2	25.2	25.0
6: 0	25.2	25.2	25.3	25.2	25.1
6:15	25.3	25.2	25.3	25.2	25.1
6:30	25.2	25.1	25.3	25.2	25.1

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	MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
_						
	6:45	25.3	25.2	25.4	25.3	25.1
	7: 0	25.3	25.2	25.4	25.3	25.1
	7:15	25.3	25.3	25.4	25.4	25.1
	7:30	25.4	25.3	25.5	25.4	25.1
	7:45	25.4	25.3	25.5	25.4	25.2
	8: 0	25.4	25.3	25.5	25.4	25.2
	8:15	25.5	25.3	25.6	25.5	25.2
	8:30	25.5	25.4	25.6	25.5	25.3
	8:45	25.5	25.4	25.6	25.5	25.3
	9: 0	25.6	25.4	25.7	25.6	25.3
	9:15	25.5	25.4	25.7	25.6	25.3
	9:30	25.6	25.5	25.7	25.6	25.3
	9:45	25.6	25.5	25.8	25.6	25.3
	10: 0	25.7	25.5	25.8	25.7	25.4
	10:15	25.7	25.6	25.8	25.7	25.4
	10:30	25.7	25.6	25.9	25.8	25.4
	10:45	25.7	25.6	25.9	25.8	25.4
	11: 0	25.8	25.6	26.0	25.8	25.5
	11:15	25.8	25.7	26.0	25.9	25.5
	11:30	25.9	25.7	26.0	25.9	25.5
	11:45	25.9	25.7	26.1	25.9	25.5
	12: 0	25.9	25.7	26.1	25.9	25.6
	12:15	25.9	25.8	26.1	26.0	25.6
	12:30	26.0	25.8	26.2	26.0	25.6
	12:45	26.0	25.8	26.2	26.1	25.6
	13: 0	26.0	25.8	26.2	26.1	25.7
	13:15	26.0	25.8	26.2	26.1	25.7

DATE: 27 MAY 1993 FILE: 147CG-3.DAT

7.7 7.7 7.8 8.8 8.8 8.8 8.8
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DATE: 27 MAY 1993 FILE: 147CG-3.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
20:15	26.7	26.3	26.9	26.7	26.2
20:30	26.7	26.4	26.9	26.7	26.2
20:45	26.7	26.4	26.9	26.8	26.2
21: 0	26.7	26.4	26.9	26.8	26.2
21:15	26.7	26.4	27.0	26.8	26.2
21:30	26.7	26.4	27.0	26.8	26.2
21:45	26.7	26.4	27.0	26.8	26.2
22: 0	26.7	26.4	27.0	26.9	26.2
22:15	26.8	26.4	27.1	26.9	26.2
22:30	26.8	26.4	27.0	26.9	26.2
22:45	26.8	26.4	27.0	26.9	26.3
23: 0	26.8	26.4	27.1	26.9	26.3
23:15	26.8	26.4	27.1	26.9	26.3
23:30	26.8	26.4	27.0	26.9	26.3
23:45	26.8	26.4	27.1	26.9	26.3
24: 0	26.8	26.4	27.1	26.9	26.3
24:15	26.8	26.4	27.1	26.9	26.3
24:30	26.9	26.5	27.2	27.0	26.3
24:45	26.9	26.5	27.1	27.0	26.3
25: 0	26.9	26.5	27.2	27.0	26.3
25:15	26.9	26.5	27.2	27.0	26.4
25:30	26.9	26.5	27.2	27.1	26.4
25:45	26.9	26.5	27.2	27.0	26.3
26: 0	26.9	26.5	27.3	27.1	26.4
26:15	26.9	26.5	27.3	27.1	26.4
26:30	27.0	26.6	27.3	27.1	26.4
26:45	27.0	26.5	27.3	27.1	26.4

DATE: 27 MAY 1993 FILE: 147CG-3.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
27: 0	27.0	26.6	27.3	27.1	26.5
27:15	27.0	26.6	27.4	27.2	26.5
27:30	27.0	26.6	27.4	27.2	26.5
27:45	27.1	26.6	27.4	27.2	26.5
28: 0	27.1	26.6	27.4	27.2	26.5
28:15	27.1	26.6	27.5	27.2	26.5
28:30	27.1	26.7	27.5	27.3	26.5
28:45	27.1	26.7	27.5	27.3	26.6
29: 0	27.1	26.7	27.6	27.4	26.6
29:15	27.2	26.7	27.6	27.4	26.6
29:30	27.2	26.7	27.6	27.4	26.6
29:45	27.2	26.7	27.6	27.4	26.6
30: 0	27.2	26.7	27.6	27.4	26.6
30:15	27.3	26.8	27.7	27.5	26.6
30:30	27.2	26.7	27.6	27.4	26.7
30:45	27.3	26.8	27.6	27.4	26.7
31: 0	27.3	26.8	27.7	27.5	26.7
31:15	27.3	26.8	27.6	27.5	26.7
31:30	27.3	26.8	27.7	27.4	26.7
31:45	27.4	26.8	27.8	27.6	26.7
32: 0	27.4	26.9	27.8	27.6	26.8
32:15	27.4	26.9	27.8	27.6	26.8
32:30	27.4	26.9	27.8	27.7	26.8
32:45	27.4	26.9	27.9	27.7	26.8
33: 0	27.5	26.9	27.9	27.7	26.8
33:15	27.5	26.9	27.9	27.7	26.8
33:30	27.5	27.0	27.9	27.7	26.9

DATE: 27 MAY 1993 FILE: 147CG-3.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
33:45	27.6	27.0	27.9	27.8	26.9
34: 0	27.5	27.0	27.9	27.7	26.9
34:15	27.6	27.0	28.0	27.8	26.9
34:30	27.6	27.0	28.0	27.8	27.0
34:45	27.6	27.0	28.0	27.8	27.0
35: 0	27.6	27.1	28.0	27.8	27.0
35:15	27.6	27.1	28.1	27.8	27.0
35:30	27.7	27.1	28.0	27.8	27.0
35:45	27.7	27.1	28.1	27.9	27.0
36: 0	27.7	27.1	28.1	27.9	27.0
36:15	27.7	27.1	28.1	27.9	27.0
36:30	27.8	27.2	28.2	28.0	27.1
36:45	27.8	27.2	28.2	28.0	27.1
37: 0	27.8	27.2	28.3	28.0	27.1
37:15	27.8	27.2	28.3	28.1	27.2
37:30	27.8	27.2	28.3	28.0	27.1
37:45	27.8	27.2	28.3	28.1	27.2
38: 0	27.9	27.3	28.3	28.1	27.2
38:15	27.9	27.3	28.3	28.2	27.2
38:30	27.9	27.3	28.4	28.2	27.2
38:45	27.9	27.3	28.4	28.2	27.3
39: 0	27.9	27.3	28.4	28.2	27.2
39:15	27.9	27.3	28.4	28.2	27.2
39:30	28.0	27.4	28.4	28.2	27.3
39:45	27.9	27.3	28.4	28.2	27.3
40: 0	28.0	27.4	28.5	28.3	27.3
40:15	28.0	27.4	28.5	28.3	27.3

DATE: 27 MAY 1993 FILE: 147CG-3.DAT

MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
40:30	28.1	27.4	28.6	28.3	27.3
40:45	28.1	27.4	28.5	28.4	27.3
41: 0	28.0	27.5	28.5	28.4	27.4
41:15	28.1	27.5	28.6	28.5	27.4
41:30	28.1	27.5	28.6	28.5	27.4
41:45	28.1	27.5	28.7	28.5	27.4
42: 0	28.1	27.6	28.8	28.6	27.4
42:15	28.1	27.5	28.7	28.5	27.4
42:30	28.1	27.6	28.7	28.6	27.5
42:45	28.2	27.6	28.8	28.6	27.5
43: 0	28.3	27.6	28.8	28.6	27.5
43:15	28.2	27.6	28.8	28.6	27.5
43:30	28.3	27.6	28.8	28.6	27.6
43:45	28.2	27.6	28.8	28.6	27.5
44: 0	28.3	27.6	28.8	28.6	27.5
44:15	28.3	27.7	28.8	28.7	27.6
44:30	28.3	27.7	28.9	28.7	27.6
44:45	28.3	27.7	28.9	28.7	27.6
45: 0	28.4	27.7	29.0	28.8	27.6
45:15	28.3	27.7	28.9	28.7	27.6
45:30	28.5	27.7	29.0	28.8	27.7
45:45	28.4	27.7	28.9	28.8	27.6
46: 0	28.4	27.7	29.0	28.8	27.6
46:15	28.4	27.7	29.0	28.8	27.7
46:30	28.4	27.8	28.9	28.7	27.6
46:45	28.5	27.7	28.9	28.7	27.7
47: 0	28.5	27.8	29.0	28.9	27.6

DATE: 27 MAY 1993 FILE: 147CG-3.DAT

	MIN:SEC	Tr 1	Tr 2	Tr 3	Tr 4	Tr 5
-						
	47:15	28.5	27.7	29.0	28.8	27.7
	47:30	28.5	27.8	29.1	28.9	27.7
	47:45	28.6	27.8	29.1	28.9	27.7
	48: 0	28.5	27.8	29.1	28.9	27.7
	48:15	28.6	27.8	29.1	28.9	27.7
	48:30	28.5	27.8	29.1	28.9	27.7
	48:45	28.6	27.8	29.1	28.9	27.8

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		E	F	E	Ė	Ė	Ė	e c	Ē	Tc 10	Te 11
MIN:SEC	181	18.2	18.5	101	261	0.61	121	0.57	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		
0:0	28.7	28.8	28.5	28.7	28.8	28.6	28.4	28.6	28.2	28.3	28.2
0:15	29.0	29.1	29.3	29.0	29.3	29.1	28.9	28.9	28.7	28.5	28.2
0:30	31.5	31.6	31.1	31.9	32.4	32.3	31.6	32.1	31.6	28.6	28.4
0:45	38.4	38.5	35.9	39.4	40.4	39.9	37.7	39.1	38.2	29.0	28.7
1: 0	47.4	47.9	43.8	48.9	50.2	49.7	45.4	48.1	46.9	29.8	29.4
1:15	55.8	57.1	52.8	58.2	59.7	59.6	52.9	57.0	55.5	31.3	30.7
1:30	63.5	65.4	61.7	8.99	68.3	8.89	60.1	65.3	63.9	33.5	32.7
1:45	71.6	73.3	71.1	75.6	77.0	78.1	67.3	74.0	72.8	36.1	35.3
2: 0	80.7	82.1	81.3	86.1	87.0	89.2	76.3	84.2	83.2	39.3	38.5
2:15	91.3	92.4	92.7	98.4	7.86	101.9	86.9	95.9	95.0	42.8	42.3
2:30	102.8	103.4	104.3	111.6	111.3	114.0	98.5	108.3	107.1	46.5	46.3
2:45	114.7	114.7	115.8	123.3	123.0	127.7	108.1	120.2	118.9	50.3	50.2
3: 0	125.8	126.0	127.7	135.4	133.5	140.9	117.4	131.7	130.5	54.2	55.0
3:15	136.8	137.2	140.0	147.5	145.6	153.7	126.2	142.2	142.3	59.4	60.2
3:30	146.0	148.6	153.1	160.0	157.8	166.8	135.0	154.0	155.1	8.78	65.5
3:45	159.5	160.8	165.3	173.0	170.8	180.8	146.9	166.8	168.5	70.3	71.5
4: 0	173.1	173.7	179.5	186.6	184.2	195.0	160.2	180.2	182.4	76.2	77.6
4:15	186.6	187.0	192.9	200.4	198.1	208.4	172.3	194.4	196.2	82.5	84.3

SWRI PROJECT NO.: 01-5592 TEST TYPE: IMO RES.A.517(13) Ts 11 115.6 124.3 134.5 143.5 160.8 194.4 202.2 209.6 107.7 152.5 178.4 186.3 216.3 222.8 235.9 242.3 170.1 229.1 Ts 10 135.6 144.6 153.6 103.5 119.0 127.3 162.5 171.2 188.2 196.3 203.8 218.8 225.9 232.5 239.5 179.7 211.7 Ts 9 331.9 373.0 223.7 237.3 250.7 277.9 291.4 304.8 318.2 345.5 359.2 400.3 413.4 425.4 442.4 264.1 448.1 387.1 435.1 Ts 8 343.6 222.1 236.2 263.8 277.1 290.3 303.5 316.9 330.3 356.8 370.2 383.3 396.0 407.7 418.7 435.6 441.7 250.1 428.1 Ts 7 319.9 357.0 9.861 210.8 223.0 235.2 246.8 259.4 271.4 282.8 295.5 308.2 331.4 343.8 367.9 378.8 389.4 399.6 407.2 Ts 6 237.4 252.2 266.0 294.6 309.0 323.9 338.4 352.3 366.4 380.4 394.0 406.5 417.6 426.5 433.9 440.6 447.3 453.3 280.1 325.0 227.4 241.8 255.8 283.3 297.3 311.4 338.3 351.9 365.6 391.9 404.3 415.6 426.0 434.9 S 269.7 442.5 448.8 379.1 S **Ts 4** 227.2 240.4 254.0 267.4 280.3 293.5 306.4 318.9 332.2 345.6 359.5 373.6 388.4 402.6 415.0 437.9 424.7 442.7 432.1 Ts 3 235.6 250.8 264.0 304.0 319.0 332.5 346.9 361.8 374.6 386.8 396.9 432.5 222.7 276.7 290.4 407.0 416.2 423.0 427.1 Ts 2 216.2 230.5 243.9 270.6 283.6 308.5 321.3 334.0 347.3 360.5 257.2 296.1 375.1 388.1 400.3 412.3 422.2 431.9 438.7 430.0 212.6 251.0 263.6 276.0 288.8 301.5 325.8 362.0 388.6 400.2 421.2 225.4 238.3 313.4 338.4 350.4 375.4 411.3 **DATE: 27 MAY 1993** FILE: 147CG-3.DAT MIN:SEC 4:45 5: 0 5:15 5:30 5:45 6:15 6:30 6:45 7: 0 7:15 7:30 7:45 8:15 8:30 8:45 9:15 6: 0 9:0

DATE FILE:

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437.1 444.5 450.4 455.4 465.3 477.0 482.3 486.0	Ts 2 T									
437.1 444.5 450.4 455.4 465.3 477.0 482.3 486.0		Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
437.1 444.5 450.4 460.3 465.3 477.0 482.3 486.0										
444.5 450.4 455.4 460.3 470.8 477.0 482.3 486.0	444.9 43	437.0	447.1	454.8	459.6	412.7	447.3	453.1	245.6	248.5
450.4 455.4 460.3 470.8 477.0 482.3 490.4	450.1 44	443.5	451.4	460.2	465.1	417.2	452.7	458.3	252.3	253.5
455.4 460.3 470.8 477.0 482.3 486.0	456.0 45	450.7	455.9	465.2	470.5	420.3	458.0	463.8	258.6	258.9
460.3 465.3 470.8 477.0 482.3 486.0	462.5 45	457.1	460.7	470.8	476.1	425.9	463.4	468.9	264.2	264.5
465.3 470.8 477.0 482.3 486.0	467.9 46	463.2	465.7	476.3	482.0	432.3	468.3	474.0	269.5	269.5
470.8 477.0 482.3 486.0	474.0 46	469.4	470.1	481.4	487.2	436.6	473.3	479.0	274.9	275.3
477.0 482.3 486.0 490.4	478.7 47	474.7	473.6	485.8	491.9	440.2	478.2	483.7	280.6	280.4
482.3 486.0 490.4	482.3 47	477.3	477.6	490.2	495.5	444.5	482.8	488.5	286.5	285.8
486.0	485.4 48	480.2	481.7	494.2	499.9	448.2	487.1	492.6	292.2	291.3
490.4	490.1 48	484.2	485.2	498.6	504.1	452.3	491.3	497.1	297.2	294.7
1	494.7 48	487.0	489.0	502.7	507.3	455.8	495.5	500.8	302.6	300.2
12:15 495.2 49	497.9 48	488.9	492.9	506.1	511.1	459.2	499.7	504.7	308.1	306.0
12:30 499.0 50	501.7 49	495.0	496.5	509.3	514.6	461.8	503.6	508.6	313.3	310.1
12:45 502.2 50	507.1 49	499.9	499.2	513.3	518.5	467.1	507.1	512.2	317.4	314.2
13: 0 506.4 51	510.0 50	504.4	502.5	516.4	521.8	470.6	510.4	515.6	321.9	318.6
13:15 510.4 51	512.6 50	507.2	506.0	519.3	524.7	474.2	513.7	518.8	326.8	321.8
13:30 513.6 51	515.9	510.5	509.2	522.7	527.8	478.5	517.1	522.1	330.8	326.1
13:45 515.5 51	519.1	513.3	512.5	526.2	531.0	481.9	520.2	524.9	334.4	329.7
14: 0 518.2 52	521.7 5	516.2	515.2	529.0	534.1	485.4	523.0	528.3	338.5	333.4

Ts 11		336.9	340.8	345.1	349.4	353.7	356.6	360.2	364.0	368.8	372.0	375.2	378.2	381.4	384.4	388.1	391.0	394.0	397.3	400.4
Ts 10		341.9	344.9	348.2	351.9	356.4	360.0	363.5	367.2	370.5	373.8	376.7	380.7	384.3	387.1	390.1	392.8	395.1	397.5	399.0
Ts 9		531.4	534.1	537.1	539.7	542.0	544.7	547.6	549.9	552.3	554.9	557.7	560.3	562.9	565.3	8.795	570.5	573.2	575.8	578.2
Ts 8		525.8	528.2	531.2	533.8	536.1	538.9	541.5	543.8	546.4	548.7	551.1	553.7	556.3	558.7	561.1	563.3	565.7	568.2	570.8
Ts 7		489.9	493.4	496.1	498.5	498.3	501.5	504.3	506.6	510.9	511.0	515.0	514.7	515.9	518.6	522.2	524.9	526.5	528.9	534.5
Ts 6		537.0	539.7	542.6	545.3	547.7	550.1	552.0	554.3	556.3	558.7	560.8	563.2	565.2	567.0	569.5	571.4	573.7	575.8	577.7
Ts 5		531.9	535.0	537.4	539.6	541.7	544.3	546.9	549.2	551.3	553.2	555.6	558.1	560.0	562.5	564.9	566.8	569.0	571.0	573.3
Ts 4		5.915	522.6	525.2	527.8	529.8	532.3	534.9	537.4	540.4	542.6	545.6	548.4	551.0	553.7	555.7	557.6	560.0	562.5	564.7
Ts 3		518.8	519.5	522.8	525.1	526.1	528.6	529.1	531.2	532.6	535.4	539.3	542.8	544.4	546.3	547.5	550.5	554.1	555.5	558.4
Ts 2		524.3	526.0	528.7	530.2	532.2	534.5	536.3	538.7	540.6	542.2	545.2	546.6	548.7	551.1	552.7	554.6	557.1	559.0	561.2
<u>s</u>		521.1	524.1	526.2	529.3	532.0	533.6	536.6	539.4	542.0	545.1	546.9	549.8	551.5	553.9	556.8	559.3	561.2	563.0	565.0
MINSEC		14:15	14:30	14:45	15: 0	15:15	15:30	15:45	16: 0	16:15	16:30	16:45	17: 0	17:15	17:30	17:45	18: 0	18:15	18:30	18:45
	11																			

DATE FILE:

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MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
19: 0	267.7	562.8	560.3	566.8	575.1	579.3	535.2	573.2	580.9	402.1	402.9
19:15	569.8	566.5	562.2	568.5	577.4	581.0	537.5	575.1	583.2	403.6	406.7
19:30	571.2	570.8	565.9	570.6	579.3	583.1	540.1	577.6	585.1	404.5	410.1
19:45	572.7	573.1	568.8	572.7	581.3	585.5	543.3	6.625	587.3	405.4	413.0
20: 0	574.8	574.8	569.7	574.8	582.9	587.0	546.6	582.2	589.0	406.8	415.6
20:15	576.7	575.0	571.0	575.9	583.9	588.5	546.3	584.1	591.0	409.5	418.8
20:30	579.0	575.8	569.8	578.1	585.4	590.4	547.0	585.8	592.6	412.9	422.3
20:45	580.0	577.7	572.4	580.2	587.0	592.0	550.1	588.2	594.8	414.7	424.6
21: 0	582.2	580.2	575.9	582.2	589.0	594.1	553.1	9.065	597.1	416.4	427.8
21:15	583.9	584.0	578.7	584.4	590.9	596.3	556.6	593.5	599.5	417.8	431.0
21:30	586.1	586.6	582.4	586.5	593.2	599.3	559.1	596.3	601.8	419.0	432.9
21:45	589.5	586.6	581.8	588.2	594.4	601.2	559.9	598.8	604.1	421.9	436.7
22: 0	591.6	588.4	586.2	590.2	596.4	603.6	560.7	601.3	606.3	425.0	439.3
22:15	592.8	590.3	589.4	592.1	598.4	0.909	563.5	604.0	608.3	427.5	441.4
22:30	595.0	592.6	590.5	594.0	9.009	9.709	568.4	2909	610.5	429.2	444.7
22:45	597.1	594.2	592.7	595.5	602.1	609.5	569.7	8.809	612.3	431.6	447.2
23: 0	599.3	596.1	593.2	597.0	603.3	611.1	569.9	610.9	614.5	434.5	449.7
23:15	0.009	599.3	597.7	598.7	602.9	613.9	572.5	613.4	616.8	435.6	452.6

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E: 27 MAY 1993 E: 147CG-3.DAT	ر آ								SW	SWRI PROJECT NO.: 01-5 TEST TYPE: IMO RES.A.517(SCT NO.: 10 RES./
MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
23:45	604.0	604.8	602.5	602.0	609.7	618.4	578.0	619.1	621.9	438.8	457.1
24: 0	8.509	0.909	602.4	604.1	611.2	620.3	581.4	621.7	623.9	440.6	459.0
24:15	9.709	607.3	605.5	606.5	613.1	622.6	580.4	624.1	626.3	443.2	461.5
24:30	9.609	8.609	0.809	6.709	615.2	624.8	583.0	626.5	628.4	445.7	462.3
24:45	611.9	612.7	609.1	609.5	617.5	627.2	585.9	628.5	630.6	447.3	464.1
25: 0	613.3	613.2	611.2	610.9	619.2	629.0	586.1	630.8	632.6	449.7	465.6
25:15	614.4	615.1	613.6	612.9	620.9	631.5	587.8	633.1	634.4	451.8	468.0
25:30	615.8	617.2	615.2	614.6	623.3	633.6	589.6	635.2	636.1	453.2	469.8
25:45	618.0	617.9	616.4	616.2	624.5	635.6	592.0	637.3	638.2	455.5	470.3
26: 0	619.7	619.2	618.4	618.0	626.0	637.4	591.7	639.0	640.1	457.5	472.0
26:15	620.1	622.2	620.2	618.9	627.6	639.4	594.7	640.9	642.2	458.1	473.9
26:30	621.4	624.3	621.4	620.1	629.0	641.2	597.3	642.4	643.9	459.1	475.5
26:45	623.7	624.6	623.6	621.0	630.2	643.0	598.5	643.9	645.6	461.7	476.7
27: 0	625.4	625.3	624.1	622.8	631.4	645.5	6.665	645.7	647.2	464.3	477.6
27:15	626.5	626.7	626.2	624.5	633.5	647.2	601.2	647.5	649.2	466.0	479.0
27:30	629.0	628.4	627.5	626.4	635.1	649.6	603.0	649.5	620.9	468.4	480.6
27:45	630.8	629.3	628.7	628.1	636.5	651.3	605.5	651.3	653.0	470.6	481.9
28: 0	631.6	830.8	631.3	629.4	638.3	653.6	0.709	653.2	624.9	471.7	483.0
28:15	632.9	633.7	634.7	631.1	640.4	656.4	8.609	654.7	657.0	472.1	484.9
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E: 147CG-3.DAT	13 L								SW TEST	SWRI PROJECT NO.: 01 TEST TYPE: IMO RES.A.51	CT NO.: 0
MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
28:30	634.7	636.4	636.0	632.5	642.3	658.2	611.7	656.4	658.7	472.4	485.9
28:45	636.5	638.6	637.4	633.8	644.1	0.099	613.3	622.9	8.099	473.0	487.7
29: 0	638.4	639.2	637.3	636.0	645.5	661.3	615.9	6.659	662.4	474.2	488.5
29:15	639.9	641.2	639.1	637.8	647.5	663.4	618.4	9.199	664.1	475.4	489.4
29:30	641.8	641.0	641.2	639.5	648.3	665.1	6.819	663.2	6.599	477.6	490.7
29:45	643.2	642.8	642.2	641.0	650.0	667.1	620.4	665.0	8.799	479.3	491.1
30: 0	644.4	645.6	644.6	642.9	652.2	669.3	622.3	8.999	2.699	479.9	491.8
30:15	647.0	646.6	644.5	644.7	653.6	670.4	624.3	668.4	672.2	481.8	493.8
30:30	648.7	647.7	645.4	646.3	655.2	672.0	625.8	670.2	674.1	483.6	493.9
30:45	650.7	648.0	646.3	648.4	656.4	673.2	656.9	671.8	675.5	485.8	494.8
31: 0	651.7	649.2	649.5	650.5	658.5	675.3	629.6	673.1	677.4	486.6	497.0
31:15	654.3	652.4	650.0	652.7	626.9	9.9/9	634.5	675.0	8.879	487.2	497.1
31:30	654.4	654.8	651.6	653.6	661.5	8.779	634.8	676.3	6.619	487.8	498.2
31:45	655.9	654.1	652.3	654.1	662.3	678.7	633.1	677.7	681.0	489.7	499.0
32: 0	627.9	655.8	653.6	655.8	663.5	680.1	636.2	679.3	682.7	491.3	500.6
32:15	659.8	657.6	655.6	627.9	665.6	681.6	638.9	8.089	684.6	492.3	502.7
32:30	660.2	658.5	656.3	658.8	8.999	682.9	637.5	682.5	0.989	494.3	504.2
32:45	662.2	659.4	658.5	660.5	668.3	684.1	640.6	684.1	687.7	496.0	504.9
33: 0	663.5	661.3	660.2	8.799	670.5	686.1	642.4	685.4	9.689	497.1	506.6

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TE: 27 MAY 1993 E: 147CG-3.DAT	93 F								SW	SWRI PROJECT NO.: 01-5 TEST TYPE: IMO RES.A.517(CT NO.: IO RES.A
MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
33:15	9.599	6.199	8.099	664.6	671.9	9.789	643.3	687.3	691.5	499.7	506.6
33:30	667.2	9.693.6	662.0	666.3	673.5	689.3	645.2	6.889	694.0	502.1	508.2
33:45	668.3	6.693.9	662.1	2.799	674.8	691.1	646.4	690.4	695.7	504.2	508.1
34: 0	8.029	665.3	663.4	9.029	9.929	692.9	648.6	692.0	6.769	506.4	510.0
34:15	672.4	666.5	666.1	672.2	678.0	694.7	649.6	693.5	6.669	508.7	512.6
34:30	673.7	8.899	8.999	673.7	679.4	696.5	650.7	695.1	701.6	510.7	513.1
34:45	675.7	8.699	668.4	675.7	8.089	9.869	652.3	6.969	703.8	513.1	514.0
35: 0	677.4	672.3	670.4	677.7	683.4	700.7	653.8	698.7	705.7	514.7	515.9
35:15	680.1	672.6	8.029	679.2	684.2	704.2	655.4	700.6	707.5	517.4	518.3
35:30	681.5	675.0	673.3	8.089	686.1	707.2	656.1	702.0	0.607	519.2	519.0
35:45	683.2	676.2	674.7	682.6	688.1	709.3	659.6	703.6	710.5	520.0	520.9
36: 0	685.0	678.7	677.3	684.0	6.689	711.0	661.0	705.0	711.9	521.1	522.8
36:15	686.4	9.629	677.5	685.1	691.3	7111.7	662.0	706.4	713.2	522.5	524.9
36:30	687.2	7.619	679.1	686.1	691.6	712.9	660.5	7.707	713.8	525.3	525.6
36:45	0.889	680.2	680.2	687.1	692.3	713.9	661.4	708.8	714.5	527.7	526.1
37: 0	0.069	680.5	680.1	688.4	693.3	714.3	661.5	8.607	715.3	530.8	527.4
37:15	6.069	682.6	683.1	689.3	694.5	715.2	6.799	710.5	716.1	532.2	529.3
37:30	6.169	684.3	684.0	6.069	695.9	715.4	666.5	711.6	716.7	533.1	531.0
37:45	692.8	685.2	686.5	692.2	8.969	717.0	0.899	712.5	717.9	534.2	532.2
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DATE: 27 MAY 1993 FILE: 147CG-3.DAT

E: 14/CO-5:DVI											
MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
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38: 0	693.6	686.1	686.3	663.9	0.869	716.9	8.899	713.9	718.3	535.0	533.1
38:15	694.7	8.989	688.4	695.0	698.3	717.4	669.4	714.6	718.8	536.4	534.2
38:30	696.2	687.7	689.1	9.969	699.3	717.1	671.5	715.3	719.7	537.9	535.9
38:45	697.2	9.889	8.069	1.769	700.0	718.0	671.6	716.0	720.2	539.0	537.0
39: 0	8.769	0.689	691.3	698.1	700.0	718.1	671.1	716.4	721.0	540.8	537.9
39:15	6.869	0.069	691.6	699.3	700.6	718.4	671.8	717.1	721.3	542.0	538.9
39:30	699.5	690.5	693.0	700.3	701.9	719.1	673.7	717.8	722.3	542.8	540.7
39:45	9.007	6.069	693.6	701.5	701.8	719.5	676.1	718.5	722.9	543.7	540.8
40: 0	701.2	692.0	694.7	702.5	702.8	719.5	677.2	719.1	723.4	544.2	541.9
40:15	702.0	691.4	0.969	702.8	703.1	719.8	675.0	719.9	724.2	545.3	542.7
40:30	702.6	692.6	697.2	704.0	703.9	719.6	675.9	720.8	725.2	545.6	543.4
40:45	703.4	692.3	0.769	704.6	704.1	719.3	675.0	721.4	725.8	547.1	543.2
41: 0	703.8	693.0	6.969	705.1	705.0	720.0	675.2	722.1	726.5	548.6	544.1
41:15	705.4	694.0	0.669	0.907	705.6	720.8	675.6	723.0	727.9	549.8	545.6
41:30	707.0	694.8	700.8	707.2	707.5	721.4	677.1	724.1	729.0	551.3	547.3
41:45	708.8	8.969	703.4	8.807	6.807	722.1	6.77.9	725.4	730.9	552.4	548.3
42: 0	709.2	6.769	705.9	710.3	710.7	724.3	678.2	727.1	732.3	553.7	549.2
42:15	711.1	6.669	707.2	712.1	712.3	725.1	6.629	728.8	733.9	555.1	549.9
42:30	712.6	8.007	708.4	713.7	714.0	726.2	681.5	730.3	735.5	556.7	552.3

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E: 27 MAY 1993 E: 147CG-3.DAT	. J								SW TEST	SWRI PROJECT NO.: 01-5: TEST TYPE: IMO RES.A.517(CCT NO.: 10 RES.A
MIN:SEC	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
42:45	713.6	701.5	709.7	715.3	715.3	726.6	681.7	731.5	736.9	558.0	552.9
43: 0	714.9	702.2	709.0	717.1	716.4	727.2	682.9	732.7	738.2	559.9	553.8
43:15	716.1	702.9	709.0	718.2	717.5	727.8	684.4	733.7	739.3	561.7	554.4
43:30	7.717	704.1	708.9	719.6	718.7	728.5	687.2	734.8	740.6	563.1	555.4
43:45	719.0	705.3	710.2	721.6	720.6	729.3	690.1	735.9	742.0	563.8	557.3
44: 0	720.3	705.8	710.3	722.0	720.9	728.9	691.2	736.7	743.7	564.8	558.9
44:15	721.1	706.6	710.5	722.7	721.4	729.5	691.7	737.9	744.8	566.0	559.4
44:30	722.6	707.1	710.0	723.3	722.1	729.7	692.1	738.6	746.0	567.6	559.8
44:45	723.1	708.2	6.607	724.2	723.1	730.0	693.8	739.7	746.9	568.7	562.1
45: 0	724.1	709.2	709.0	725.6	724.0	730.2	696.3	740.8	747.6	569.9	562.1
45:15	724.3	709.5	708.7	726.2	724.6	731.1	694.7	741.4	748.5	571.0	562.4
45:30	724.2	710.0	708.1	726.7	725.3	731.1	8.569	741.9	749.5	571.6	564.8
45:45	724.8	710.6	709.1	727.8	726.2	731.2	698.3	742.7	750.4	572.2	565.8
46: 0	724.8	711.8	7.607	727.8	726.8	731.5	8.769	743.0	750.9	573.1	566.0
46:15	724.7	711.9	708.8	727.9	726.9	731.6	697.4	743.0	751.6	573.7	566.9
46:30	724.8	712.3	8.607	729.0	727.6	731.3	699.5	743.2	752.1	574.2	567.2
46:45	724.0	712.0	709.1	729.1	727.9	731.5	2.869	743.2	752.9	574.5	569.6
47: 0	725.9	712.0	710.7	729.6	728.3	731.8	700.3	743.4	753.3	576.0	569.0
47:15	725.7	712.0	710.0	730.0	728.6	731.0	700.5	743.5	753.6	576.9	569.8
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DATE: 27 MAY 1993 FILE: 147CG-3.DAT	L								SW TEST	RI PROJE TYPE: IM	SWRI PROJECT NO.: 01-9 TEST TYPE: IMO RES.A.517
MIN:SEC Ts 1	Ts 1	Ts 2	Ts 3	Ts 4	Ts 5	Ts 6	Ts 7	Ts 8	Ts 9	Ts 10	Ts 11
47:30	725.7	712.5	712.7	730.3	728.7	731.8	697.1	743.3	753.7	578.1	570.5
47:45	725.7	712.6	714.6	730.5	728.6	731.3	696.3	743.0	754.2	579.1	570.8
48: 0	726.5	713.4	715.3	731.6	729.4	730.6	0.669	742.9	755.2	579.6	573.3
48:15	727.3	714.3	716.9	731.9	729.8	731.1	699.3	743.4	755.5	580.5	574.5
48:30	726.6	713.4	718.1	731.7	700.8	728.9	6.669	742.4	754.8	580.2	577.2
48:45	722.5	708.2	9.802	724.6	0.0	721.2	692.8	733.7	747.1	580.0	590.7